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1995 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST FUNDS

COMMUNICATION

FROM

THE BOARD OF TRUSTEES, FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST FUNDS

TRANSMITTING

THE 1995 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND THE FEDERAL DISABILITY INSURANCE TRUST FUNDS, PURSUANT TO SECTION 201(C)(2) OF THE SOCIAL SECURITY ACT, AS AMENDED

APRIL 3, 1995.—Referred to the Committee on Ways and Means and ordered to be printed

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LETTER OF TRANSMITTAL

BOARD OF TRUSTEES OF THE
FEDERAL OLD-AGE AND SURVIVORS INSURANCE
AND DISABILITY INSURANCE TRUST FUNDS,
Washington, D.C., April 3, 1995

HONORABLE Newt Gingrich
Speaker of the House of Representatives
Washington, D.C.

HONORABLE Albert Gore, Jr.
President of the Senate
Washington, D.C.

GENTLEMEN: We have the honor of transmitting to you the 1995 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance Trust Fund and the Federal Disability Insurance Trust Fund (the 55th such report), in compliance with section 201(c)(2) of the Social Security Act.

Respectfully,

Robert E. Rubin, *Secretary of the Treasury, and Managing Trustee of the Trust Funds.*

Robert B. Reich, *Secretary of Labor, and Trustee.*

Donna E. Shalala, *Secretary of Health and Human Services, and Trustee.*

Shirley S. Chater, *Commissioner of Social Security, and Trustee.*

Stanford G. Ross, *Trustee.*

David M. Walker, *Trustee.*

Lawrence H. Thompson, *Principal Deputy Commissioner of Social Security, and Acting Secretary, Board of Trustees.*

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I. OVERVIEW

A. INTRODUCTION

The Old-Age, Survivors, and Disability Insurance (OASDI) program in the United States provides protection against the loss of earnings due to retirement, death, or disability. The OASDI program consists of two separate parts which pay monthly benefits to workers and their families—Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI). Under OASI monthly benefits are paid to retired workers and their families and to survivors of deceased workers. Under DI monthly benefits are paid to disabled workers and their families.

The Board of Trustees is established under the Social Security Act to oversee the financial operations of the Federal Old-Age and Survivors Insurance Trust Fund and the Federal Disability Insurance Trust Fund. The Board is composed of six members, four of whom serve automatically by virtue of their positions in the Federal Government: the Secretary of the Treasury, who is the Managing Trustee, the Secretary of Labor, the Secretary of Health and Human Services, and the Commissioner of Social Security. The other two members are appointed by the President and confirmed by the Senate to serve as public representatives. Stanford G. Ross and David M. Walker began serving 4-year terms on October 2, 1990. They have continued serving through the issuance of this report under the provision of the Social Security Act that allows a public representative whose term has expired to continue in the position until the earlier of the time at which a successor takes office or the Board's next annual report is issued. The Commissioner of Social Security became a member of the Board effective March 31, 1995, under the Social Security Independence and Program Improvements Act of 1994 (Public Law 103-296, signed August 15, 1994).

The Social Security Act requires that the Board, among other duties, report annually to the Congress on the financial and actuarial status of the OASI and DI Trust Funds. This annual report, for 1995, is the 55th such report.

B. ADVISORY COUNCIL

The Secretary of Health and Human Services on June 9, 1994, announced the appointment of an Advisory Council on Social Security under the provisions of section 706 of the Social Security Act which were in effect prior to the enactment of the Social Security Independence and Program Improvements Act of 1994 (Public Law 103-296) on August 15, 1994. The provisions of the Social Security Act prior to enactment of Public Law 103-296 provided for the appointment of an Advisory Council every 4 years to examine issues affecting the OASDI program as well as the Medicare program. Under the provisions of Public Law 103-296, this is the last Advisory Council to be appointed.

The Council is composed of a Chair and 12 members representing employers and employees, self-employed persons, and the public. The Council is focusing on the OASDI program. Among the areas the Secretary has specifically asked the Council to examine is Social Security financing. The Council has been charged with developing recommendations for improving the long-range financial status of the OASDI program.

The Council convened a Technical Panel on Assumptions and Methods to review the assumptions and methodology used to project the future financial status of the OASDI program, including, if necessary, measures of the financial soundness of the program. (A Technical Panel on Trends and Issues in Retirement Saving was also convened.)

The Council is expected to provide a report to the Secretary in 1995. The Council's final report will then be transmitted by the Secretary to the Congress and to the Board of Trustees. Recommendations of the Council will be included in a later annual report of the Board of Trustees.

C. HIGHLIGHTS

The more important developments since the 1994 Annual Report was issued are shown below:

- During calendar year 1994, OASDI benefits amounting to $316.8 billion were paid to retired and disabled workers and their families, and to survivors of deceased workers.
- The number of persons receiving monthly OASDI benefits at the end of December 1994 was 42.9 million.
- In 1994, an estimated 139 million people worked in jobs covered by the OASDI program and paid OASDI contributions on their earnings.
- Income to the combined OASI and DI Trust Funds amounted to $381.1 billion in calendar year 1994, and expenditures were $323.0 billion. The assets of the combined funds, therefore, increased by $58.1 billion, from $378.3 billion at the end of December 1993 to $436.4 billion at the end of December 1994.
- Assets at the beginning of the year, as a percentage of expenditures during the year, increased from 117 percent at the beginning of 1994 to an estimated 128 percent at the beginning of 1995, for the combined OASI and DI Trust Funds.
- Interest earnings on the invested assets of the combined OASI and DI Trust Funds were $31.1 billion in calendar year 1994. This represented an effective annual interest rate of 8.0 percent, earned by the combined assets during calendar year 1994. During the same period, the average interest rate on new securities purchased by the trust funds was 7.1 percent.
- Administrative expenses for the OASDI program were $2.7 billion in calendar year 1994, or about 0.8 percent of benefit payments in the year.
- An automatic benefit increase of 2.8 percent became effective for December 1994. The OASDI contribution and benefit base was increased from $60,600 for 1994, to $61,200 for 1995.
- A greater portion of the OASDI tax rate was allocated to the DI Trust Fund effective retroactively with respect to wages paid after December 31, 1993, and to self-employment income for taxable years beginning after such date. This reallocation of tax rates changed the expected date of exhaustion of the DI Trust

Overview

Fund from 1995 to 2016 under the "intermediate" set of assumptions of this report. The intermediate set of assumptions represents the Trustees' "best estimates" of likely future economic and demographic conditions.

The major findings of this report are summarized below:

- In the short range (i.e., the next 10 years) the combined assets of the OASI and DI Trust Funds are expected to increase from the current level of $436.4 billion, or 128 percent of annual expenditures, to $1,273 billion, or 230 percent of annual expenditures, at the beginning of the year 2004, based on the intermediate assumptions.

- The OASI Trust Fund is expected to increase rapidly during the next 10 years, from 139 percent of annual expenditures at the beginning of 1995 to about 246 percent of annual expenditures at the beginning of the year 2004, based on the intermediate assumptions.

- The DI Trust Fund is expected to increase rapidly for most of the next 10 years, rising from 54 percent of annual expenditures at the beginning of 1995 to 142 percent of annual expenditures at the beginning of 2003, based on the intermediate assumptions. While the assets of the fund, in nominal dollars, continue to grow during the entire short-range period consisting of the next 10 years, assets relative to annual expenditures begin to decline in 2003, becoming 140 percent at the beginning of 2004.

- In the long range (i.e., the next 75 years) income and expenditures are generally expressed as a percentage of the total amount of earnings subject to taxation under the OASDI program (referred to as "taxable payroll"). Summarized income and cost rates over the 75-year period are determined through present-value calculations and by taking into account actual beginning fund balances and targeted ending fund balances (or reserves) of 100 percent of annual expenditures.

  Overall, for the period 1995-2069, the difference between the summarized income and cost rates for the OASDI program is a deficit of 2.17 percent of taxable payroll based on the intermediate assumptions, slightly larger than the difference of 2.13 percent in last year's report.

- On a combined basis, the OASDI program is not in "close actuarial balance" over the next 75 years. (To be in close actuarial

balance, the OASDI program must meet the long-range test described in the section entitled "Actuarial Estimates" later in this report.) In addition, the individual OASI and DI Trust Funds are not in close actuarial balance. These results are the same as those shown in the 1994 Annual Report.

- Income from OASDI payroll taxes represents 12.4 percent of taxable payroll—made up of the 6.2 percent tax rate paid by employees and a matching amount paid by their employers. (Self-employed workers pay OASDI taxes at the combined employee-employer rate.) Since these tax rates are not scheduled to change in the future under present law, OASDI payroll tax income as a percentage of taxable payroll remains constant at 12.4 percent.

  The income tax revenues that result from taxing up to one-half of the benefits are transferred to the OASI and DI Trust Funds and are currently equivalent to about 0.2 percent of taxable payroll. (Additional revenue resulting from taxing more than 50 percent, up to 85 percent, of benefits is transferred to the Hospital Insurance Trust Fund.) Adding the OASDI income from the taxation of benefits to the income from payroll taxes yields a total "income rate" of 12.6 percent. This total income rate is estimated to increase gradually to 13.3 percent of taxable payroll by the end of the 75-year projection period based on the intermediate assumptions. The growth is attributable, in part, to increasing proportions in both the number of beneficiaries and the amount of their benefits subject to taxation in the future. These proportions will increase because the income thresholds, above which benefits are taxable, are not indexed to future increases in average prices or average income.

- OASDI expenditures for benefit payments and administrative expenses currently represent about 11.5 percent of taxable payroll. This "cost rate" is estimated to remain below the corresponding income rate for the next 18 years, based on the intermediate assumptions. With the retirement of the "baby-boom" generation starting in about 2010, OASDI costs will increase rapidly relative to the taxable earnings of workers. By the end of the 75-year projection period, the OASDI cost rate is estimated to reach 19.0 percent under the intermediate assumptions, resulting in an annual deficit of about 5.7 percent.

  Expressed as a percentage of gross domestic product (GDP), the cost of the OASDI program is estimated to rise from its current

level of 4.8 percent of GDP to 6.8 percent of GDP by the end of the 75-year projection period.

- Under the intermediate assumptions, the excess of OASDI tax revenues over expenditures for the next 18 years, together with interest earnings on the trust funds, will result in a rapid accumulation of assets for the combined OASI and DI Trust Funds during this period. However, total income is estimated to fall short of expenditures beginning in 2020 and continuing thereafter, under the intermediate assumptions. In this circumstance, trust fund assets would be redeemed to cover the difference. The assets of the combined OASI and DI Trust Funds are estimated to be depleted under present law in 2030 based on the intermediate assumptions.

  The assets of the trust funds are generally invested in special securities of the U.S. Treasury. The initial accumulation of assets will result in a substantial cash flow from the trust funds to the general fund of the Treasury, and the amount of special securities held by the combined trust funds will increase. The subsequent redemption of securities will cause this cash flow to reverse. The magnitude and pattern of these cash flows have important economic and public policy implications that extend beyond the operation of the OASDI program itself.

- Because the OASDI program is not in close actuarial balance, the long-range deficits of both the OASI and DI Trust Funds should be addressed. The Secretary of Health and Human Services has directed the current Advisory Council on Social Security to conduct an extensive review of Social Security financing issues and develop recommendations for restoring the long-range actuarial balance of the OASDI program.

D. TRUST FUND FINANCIAL OPERATIONS

The various sources of income to the OASDI program, and categories of expenditures, can be illustrated by reference to the actual transactions during calendar year 1994. The following table summarizes these transactions.

Type of income or expenditure	Amount in calendar year 1994 (in billions)		
	OASI	DI	OASDI
Total income	$328.3	$52.8	$381.1
Payroll taxes	293.3	51.4	344.7
Taxation of benefits	5.0	0.3	5.3
Interest	29.9	1.2	31.1
Total expenditures	284.1	38.9	323.0
Benefit payments	279.1	37.7	316.8
Railroad Retirement financial interchange	3.4	0.1	3.5
Administrative expenses	1.6	1.0	2.7

Note: Totals do not necessarily equal the sums of rounded components.

1. Income

Most OASDI income consists of the taxes paid by employees, employers, and the self-employed on earnings covered by the OASDI program. These taxes (also called contributions) represent a portion of the payroll taxes collected under the Federal Insurance Contributions Act (FICA) and the Self-Employment Contributions Act (SECA). The balance of the FICA and SECA contributions are used to finance the Hospital Insurance (HI) program, commonly referred to as "Part A" of Medicare. The taxes for the OASDI program are paid on earnings up to a specified maximum annual amount (the "contribution and benefit base"). Prior to 1994, HI taxes were also paid on earnings up to a maximum amount each year but are now paid on total covered earnings, without limitation. The following table shows the OASDI contribution and benefit base and the allocation of the FICA and SECA tax rates by program for 1995.

For 1995...	OASI	DI	OASDI	HI	Total for OASDI and HI
Maximum taxable amount of earnings	$61,200	$61,200	$61,200	—	—
Tax rate for employees and employers, each (in percent)	5.26	0.94	6.20	1.45	7.65
Tax rate for self-employed persons (in percent)	10.52	1.88	12.40	2.90	15.30

Overview

The tax rates for OASDI and for HI are not scheduled to change from their current values under present law. The maximum amount of earnings subject to OASDI taxes increases automatically each year, based on the increase in the average wage for all workers. In calendar year 1994, OASDI payroll tax income amounted to $344.7 billion, representing 90 percent of the total income received under the OASDI program during the year.

Beneficiaries whose "adjusted gross income" exceeds certain threshold amounts must pay income taxes on up to 85 percent of their annual OASDI benefits. The income tax revenue that results from taxing up to 50 percent of those benefits, together with taxes withheld from the benefits paid to non-resident aliens, is credited to the OASI and DI Trust Funds and totaled $5.3 billion in 1994. (The additional tax revenue that results from taxing up to 85 percent of benefits is credited to the HI Trust Fund.)

The final source of income to the trust funds is from interest on the invested assets of the funds. By law, these investments must be in interest-bearing securities of the U.S. Government or in securities guaranteed by the United States. Interest from investments in 1994 amounted to $31.1 billion.

2. Expenditures

In 1994, benefit payments totaling $316.8 billion were made to retired and disabled workers and their families, and to survivors of deceased workers. Such payments represent 98 percent of all expenditures by the OASDI program. An additional $3.5 billion was transferred from the OASI and DI Trust Funds to the Railroad Retirement program in 1994, under provisions of the law requiring a financial interchange between the two programs. The cost of administering the OASDI program in 1994 was $2.7 billion, or about 0.8 percent of total benefits paid during the year.

3. Trust Fund Assets

In 1994, total income was $381.1 billion and total expenditures were $323.0 billion. The assets of the OASI and DI Trust Funds therefore increased by a net total of $58.1 billion during the year, from $378.3 billion to $436.4 billion. The invested assets of the trust funds are

backed by the full faith and credit of the U.S. Government, in the same way as other public-debt obligations of the United States.

If income to a trust fund is inadequate to defray expenditures, the fund's assets serve as a contingency reserve to cover the shortfall temporarily. For example, the expenditures of the DI Trust Fund exceeded income to the fund for most of 1994 (prior to enactment of the OASDI tax rate reallocation), necessitating a redemption of assets to cover the difference. In the event of recurring shortfalls, the availability of trust fund assets allows time for the enactment and implementation of legislation to restore financial stability to the program.

Conversely, when program income exceeds expenditures, the trust fund serves as a vehicle to help fund a portion of the program's accruing financial obligations in advance. In particular, as invested assets continue to increase over the next 20 to 30 years, interest earnings will become a larger share of total trust fund income. In 1994, interest income to the combined OASI and DI Trust Funds represented 8.2 percent of total OASDI income. On a combined basis, interest income in 2004 would represent an estimated 13.7 percent of total income.

E. INTRODUCTION TO ACTUARIAL ESTIMATES

The financial and actuarial status of the OASDI program is traditionally evaluated for both short range (the next 10 years) and long range (the next 75 years) periods. The various income and expenditure items described in the previous section are estimated separately, and then combined to form estimates of the future level of trust fund assets.

A period of 75 years is used to evaluate the long-range actuarial status of the program in order to obtain the full range of financial commitments that will be incurred on behalf of all current program participants. For example, a group of workers now entering the labor force at age 22 will work and pay OASDI taxes for the next 45 years before reaching age 67. At age 67, those surviving may retire and begin to receive full benefits (i.e., not reduced for early retirement). Some of them may live and receive benefits for more than 30 years. Thus, a 75-year projection period will include the entire working and retired life span of the great majority of workers now contributing to the program, as well as those now receiving benefits.

Because of the inherent uncertainty in estimates for as long as 75 years into the future, projections are shown in this report under three alternative sets of assumptions regarding future economic and demographic trends. Designated as alternatives I, II, and III, these sets range from low cost (alternative I) to high cost (alternative III), with alternative II representing the set of intermediate cost assumptions. The low cost set is more optimistic from the standpoint of OASDI financing and the high cost set is more pessimistic. In the tables in this report, the intermediate estimates, which the Board of Trustees regard as their "best estimates," will be shown first followed by the low cost and high cost estimates.

From the estimated income, expenditure, and asset amounts, a number of different measures are calculated for use in evaluating the financial status of the program. Because of the difficulty in comparing dollar values for different periods, these measures are generally based on relative scales (although financial operations in nominal and inflation-adjusted dollar amounts are also available). These relative measures include (1) the annual amounts of future income and outgo as a percentage of the amount of earnings subject to the OASDI payroll tax, (2) the annual differences between these income and

outgo figures, and (3) summarized values representing these figures over various periods. The level of trust fund assets relative to annual expenditures and the year in which the trust fund is projected to be exhausted are also presented as additional measures for evaluating the financial status of the program. Careful review of these measures provides a reasonably complete picture of the financial outlook for the OASDI program.

The program is also subject to two explicit tests of financial status (see section II.F)—a short-range test and a long-range test. The purpose of these tests is to provide objective criteria for determining whether or not the projected financial status of the OASDI program is considered satisfactory in each time period. The tests help highlight the need for corrective action when they are not met.

As usually required in the analysis of any complex subject, these summary tests should be considered in conjunction with a full understanding of the year-by-year patterns, trends, and other financial characteristics revealed by the underlying actuarial projections.

F. ECONOMIC AND DEMOGRAPHIC ASSUMPTIONS

Actual future income from OASDI payroll taxes and other sources, and actual future expenditures for benefits and administrative expenses, will depend upon a large number of factors: the size and composition of the population that is receiving benefits, the level of benefit amounts, the size and characteristics of the work force covered under OASDI, and the level of workers' earnings. These factors will depend in turn upon future marriage and divorce rates, birth rates, death rates, migration rates, labor force participation and unemployment rates, disability incidence and termination rates, retirement age patterns, productivity gains, wage increases, cost-of-living increases, and many other economic and demographic circumstances affecting the OASDI program.

While it is reasonable to assume that actual trust fund experience will fall within the range defined by the three alternative sets of assumptions used in this report, no definite assurance can be given that this will occur because of the uncertainty inherent in projections of this type and length. In general, a greater degree of confidence can be placed in the assumptions and estimates for the earlier years than for the later years. Nonetheless, even for the earlier years, the estimates are only an indication of the expected trend and general range of future program experience.

The assumptions vary, in most cases, from year to year during the first 5 to 25 years before reaching their ultimate values for the remainder of the 75-year projection period. The following table summarizes the ultimate values assumed for the key economic and demographic factors underlying the actuarial estimates shown in this report. These ultimate values apply for years after 2019, with the exception of life expectancy, which is assumed to continue improving throughout the projection period.

Ultimate assumptions	Intermediate	Low Cost	High Cost
Annual percentage change in:			
Average wage in covered employment	5.0	4.5	5.5
Consumer Price Index (CPI)	4.0	3.0	5.0
Real-wage differential (percent)	1.0	1.5	0.5
Unemployment rate (percent)	6.0	5.0	7.0
Annual interest rate (percent)	6.3	6.0	6.5
Total fertility rate (children per woman)	1.9	2.2	1.6
Life expectancy at birth in 2070 (combined average for men and women, in years)	80.7	77.9	84.4
Annual net immigration (in thousands)	900.0	1,150.0	750.0

These key assumptions for this report are similar to the assumptions used in the 1994 report. The only significant change in any of the ultimate economic or demographic assumptions is an increase in the annual net immigration. The net number of other-than-legal immigrants assumed to enter the Social Security area population each year was increased by 50,000. This increase is consistent with estimates based on recent data from the Immigration and Naturalization Service.

Revisions of other economic and demographic assumptions for the early years of the projection period, based on data collected since the 1994 report, had little effect in the long range, with the exception of life expectancy and fertility. Data obtained since last year's report indicate that life expectancy in 1992 and 1993 was somewhat lower than was estimated a year ago. Projected values for life expectancy through the year 2070 are thus somewhat lower than estimated a year ago because the assumed ultimate rate of improvement in mortality was not changed for this report. Data for birth rates available since last year's report indicate slightly higher levels than were assumed a year ago. As a result, projected fertility rates are slightly higher for this year's report during the first 25 years, before the ultimate rates are attained. Taken alone, higher fertility rates for the first 25 years would result in a larger population throughout the 75-year period.

These assumptions reflect a careful assessment of past data and future prospects. No major changes in ultimate economic or demographic assumptions, other than those made for immigration, were deemed necessary to ensure that the financial projections continue to be based on the most plausible range of economic and demographic conditions. Other changes in assumptions and methods reflected in the estimates in this report are discussed in section II.F.

G. SHORT-RANGE ACTUARIAL ESTIMATES

The financial status of the OASDI program during the next 10 years (1995-2004) is measured by the estimated level of trust fund assets. Because of inflation, economic growth, and growth in the OASDI program, asset levels expressed in nominal dollar amounts are not comparable over long periods of time. For this reason, it is more informative to consider a relative measure of the program's financial condition.

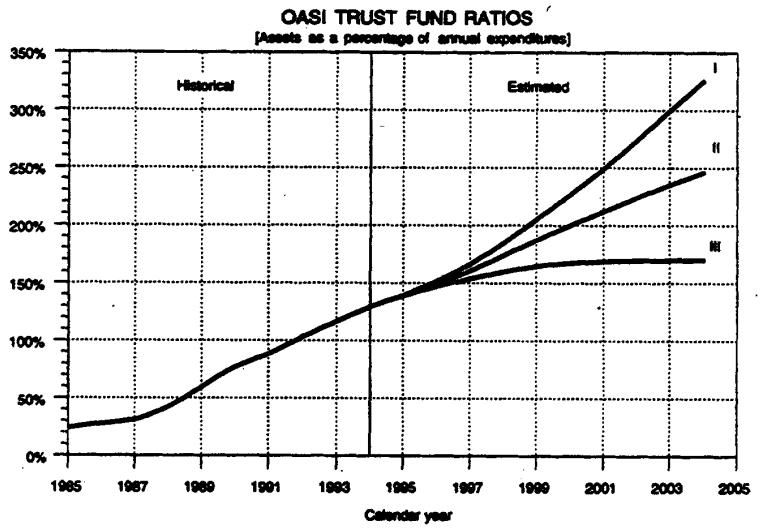
For example, OASDI assets at the beginning of calendar year 1995 amounted to $436 billion, while assets at the beginning of 1960 were $22 billion. The asset level in 1995 would be sufficient to cover roughly 15 months of expenditures in the absence of other income. Assets in 1960, although much smaller in nominal dollars, could have covered about 22 months of expenditures and thus represented a somewhat stronger contingency reserve.

The ratio of trust fund assets at the beginning of a year to expenditures during the year is termed the "trust fund ratio." This ratio serves as the primary measure of the fund's financial adequacy in the short range. It is also used when applying an explicit test of short-range financial adequacy.

1. OASI Trust Fund

The chart shown on the following page presents historical trust fund ratios for the OASI Trust Fund in 1985-94 and estimated ratios for 1995-2004 based on the alternative sets of assumptions.

As shown in the chart, the OASI trust fund ratio is estimated to increase from 139 percent at the beginning of 1995 to 246 percent by 2004, based on the intermediate (alternative II) assumptions. The ratio is also estimated to increase during the next 10 years under both the low cost (alternative I) and high cost (alternative III) assumptions. Because OASI assets are estimated to exceed 100 percent of annual expenditures throughout the next 10 years, the OASI Trust Fund meets the requirements of the Trustees' formal test of short-range financial adequacy. (This test is described in detail in the section entitled "Actuarial Estimates" later in this report.) Thus, the financing scheduled under present law for the OASI Trust Fund is



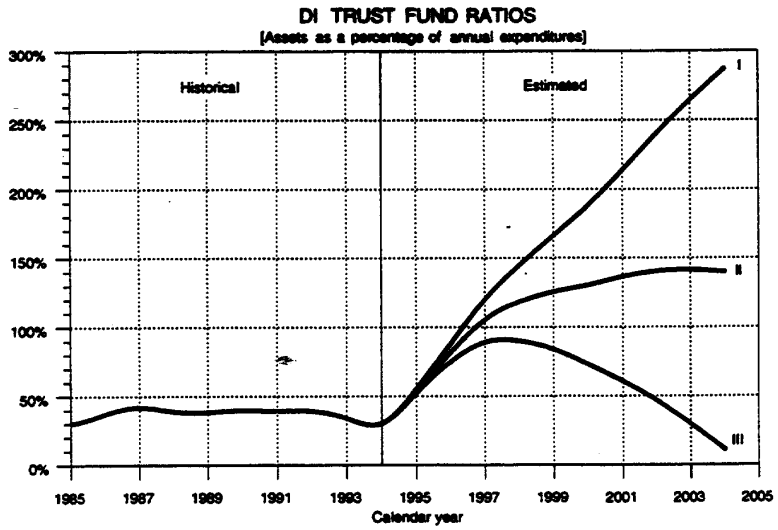
considered fully adequate to meet future expenditures over this period and to provide for an adequate contingency reserve.

2. DI Trust Fund

While the DI Trust Fund was *not* adequately financed in the short range under the estimates prepared for the 1994 Trustees Report, legislation enacted in 1994 provided additional financing to the DI Trust Fund through a reallocation of a portion of the OASI tax rate. As a result of this additional revenue, the DI Trust Fund now appears to be adequately financed for the immediate future. As shown in the chart on the following page, the DI trust fund ratio is estimated to increase from 54 percent at the beginning of 1995 to 140 percent by 2004, based on the intermediate (alternative II) assumptions. Because DI assets are estimated to reach the level of 1 year's expenditures at the beginning of 1997 and remain above that level in 1998 and later, the DI Trust Fund meets the requirements of the Trustees' formal test of short-range financial adequacy under the intermediate cost assumptions.

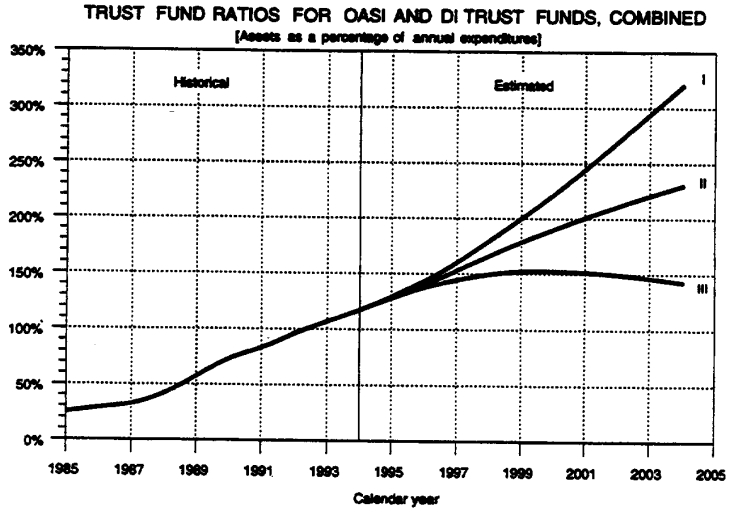
However, as also shown in the chart, under the high cost assumptions, not only does DI fail to meet the short-range test of financial

adequacy, the DI Trust Fund is projected to be exhausted near the end of the short-range projection period.



3. OASI and DI Trust Funds, Combined

The following chart summarizes the trust fund ratio for the OASI and DI Trust Funds, combined, in the recent past and estimates for the next 10 years.



As shown, the trust fund ratio for OASI and DI on a combined basis is estimated to increase from 128 percent at the beginning of 1995 to 230 percent by 2004, based on the intermediate assumptions. While the ratio would also increase throughout the 10-year period based on the low cost assumptions, it would begin to decline after the year 2000 under the high cost assumptions (but would remain above 100 percent throughout the short-range period). Because the trust fund ratio for the combined funds is estimated to remain above 100 percent under the intermediate assumptions, the combined funds meet the short-range test of financial adequacy.

H. LONG-RANGE ACTUARIAL ESTIMATES

The long-range financial estimates provided in this section generally relate to the OASI and DI Trust Funds on a combined basis. However, as the OASI and DI programs are legally separate, a final assessment of the financial status of these funds must be provided on a separate basis, as is done later in this section. More detailed estimates for these trust funds, both separately and combined, can be found in section II.F2 of this report.

Each year estimates of the financial and actuarial status of the OASDI program are prepared for the next 75 years. Although financial estimates for periods as long as 75 years are inherently uncertain, the results can provide valuable information for use by policymakers. In particular, such estimates can indicate whether the program—as seen from today's vantage point—is considered to be in satisfactory financial condition.

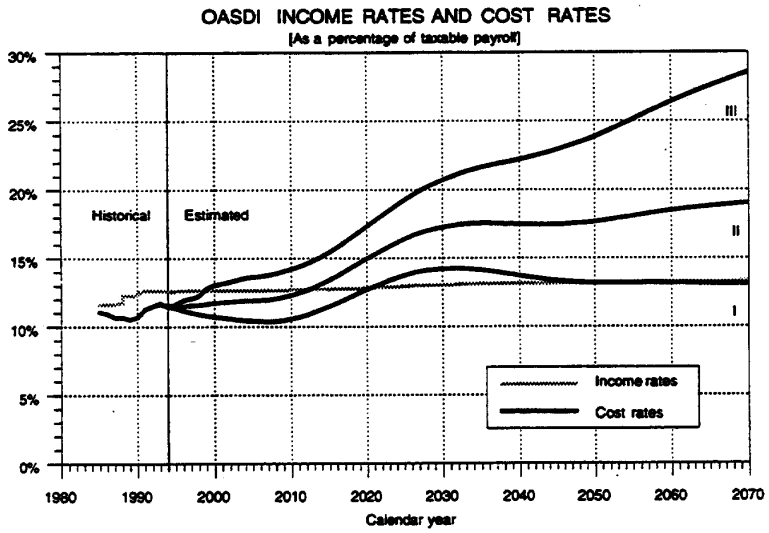
As mentioned previously, a number of different measures are useful in evaluating the financial status of the trust funds over the next 75 years. In addition to the actuarial balance and the trust fund ratio, emphasis is placed on the relationship between the levels of future tax income and future expenditures for each year (relative to the amount of earnings subject to the OASDI payroll tax). The year-by-year patterns of this relationship are of particular interest.

In addition to the presentation of long-range estimates, a specific test of the program's long-range financial status is applied. This test is referred to as the test for long-range "close actuarial balance."

1. Annual Income Rates, Cost Rates, and Balances

The following chart compares past and estimated future OASDI income (from payroll taxes on covered earnings and income taxes on OASDI benefits) with OASDI expenditures (for benefits and administrative expenses). Included are historical data for the past 10 calendar years (1985-1994) and estimates for the 75-year long-range projection period (1995-2069) under the three alternative sets of assumptions. The chart includes values through 2070, as do many of the long-range tables in the Actuarial Analysis section, in which values are presented for every fifth year of the long-range period and continue through 2070, thereby encompassing the full 75-year pro-

jection period which ends with 2069. These income and expenditure amounts are shown relative to the earnings in covered employment that are taxable under the OASDI program—referred to as "taxable payroll." The ratio of tax income (including both payroll taxes and income from taxation of benefits) to taxable payroll is called the "income rate" and the ratio of expenditures to taxable payroll is the "cost rate."



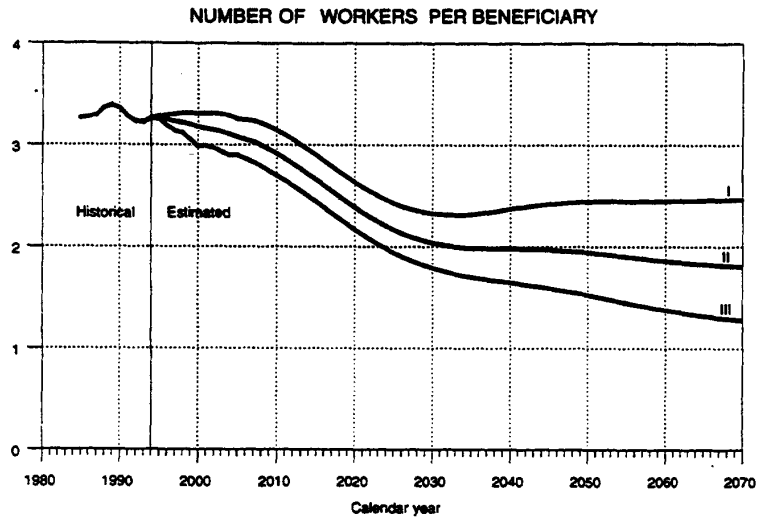
For calendar year 1995, the income rate for the OASDI program is estimated to be about 12.58 percent of taxable payroll. This rate is made up of the combined tax rate payable by employees and employers, 12.40 percent, plus the revenue from the income taxation of OASDI benefits, equivalent to 0.18 percent of taxable payroll. Since OASDI payroll tax rates are not scheduled to change in the future under present law, payroll tax income as a percentage of taxable payroll remains constant at about 12.40 percent. Income from the taxation of benefits will gradually increase, primarily because a greater proportion of beneficiaries will become subject to taxation. Thus, the income rate is projected to increase somewhat from its current level, reaching about 13.33 percent of taxable payroll by the year 2070. The income rate projection shown in the chart is based on the intermediate set of assumptions (alternative II) only; the projections

under the low cost and high cost sets of assumptions (alternatives I and III, respectively) are very similar.

As the chart indicates, the pattern followed by the estimated cost rates is much different. Costs as a percentage of taxable payroll are estimated to rise slowly for about 15 years (or to decline slowly, in the case of alternative I) and then to increase rapidly for about the next 20 years. Thereafter, cost rates are estimated to grow less rapidly (or to decline somewhat, in the case of alternative I). By the year 2070 the cost rate is estimated to have reached 13.09 percent, 19.04 percent, and 28.54 percent under alternatives I, II, and III, respectively.

The primary reason that the estimated OASDI cost rate increases rapidly after about 2010 is that the number of beneficiaries is projected to increase more rapidly than the number of covered workers. Because the cost rate expresses expenditures (primarily payments to beneficiaries) as a percentage of taxable payroll (the taxable earnings of covered workers), there is a close relationship between the demographic characteristics of the population and the OASDI cost rate.

The following chart shows the estimated number of covered workers per OASDI beneficiary. In 1994, there were about 3.3 workers for every beneficiary. As indicated, this ratio is expected to decline substantially in the future under all three sets of assumptions. Most of this decline will occur as the relatively large number of persons born during the "baby boom" (from the end of World War II through the mid-1960s) reaches retirement age and begins to receive benefits. At the same time, the relatively small number of persons born during the subsequent period of low fertility rates will comprise the labor force. Between 2030 and 2050, the number of workers per beneficiary is relatively stable as the "baby-boom" generation diminishes in size. After the year 2050, this ratio will continue to decline at a slower pace for the intermediate and high cost projections, reflecting the increasing numbers of beneficiaries due to assumed increases in life expectancy. Based on the low cost assumptions, a slow increase in this ratio is projected to occur after 2050. By the end of the 75-year projection period, the number of workers per beneficiary is projected to decline to 2.5, 1.8, and 1.3 under the low cost (alternatives I), intermediate (alternative II), and high cost (alternative III) assumptions, respectively.



The difference between the income rate and the cost rate in a given year is referred to as the "annual balance" for that year. The estimated pattern of the OASDI annual balance depends significantly on the economic and demographic conditions assumed to occur in the future. Income rates are estimated to exceed cost rates for the next 26, 18, and 4 years, under alternatives I, II, and III, respectively, resulting in positive annual balances. Thereafter, under the intermediate assumptions, the annual deficit would rise rapidly, reaching 2 percent of taxable payroll by 2020 and 5.71 percent in the year 2070. Under alternative I, a temporary period of deficits in excess of 1 percent of taxable payroll (from 2027 through 2037) would be followed by a return to relatively small deficits lasting throughout the remainder of the projection period. Under adverse conditions, as assumed in alternative III, the deficit would grow very rapidly, to nearly 15 percent of taxable payroll by the year 2070.

2. Summarized Income Rates, Cost Rates, and Balances

It is useful to consider the income and cost rates on a summarized basis over the three 25-year subperiods that make up the 75-year projection period. For this purpose, the annual income rates are summarized by calculating the present value of future tax income

for the period in question, and expressing it as a percentage of the present value of future taxable payroll for that period. ("Present values" are used in financial analysis to calculate the lump-sum equivalent value, at a particular point in time, of a series of future amounts or transactions. See the Glossary for additional information.) Similarly, a summarized cost rate is calculated, based on the present value of future expenditures as a percentage of the present value of future taxable payroll. The following table shows these summarized amounts for the OASDI program for the three 25-year subperiods.

	Income rate	Cost rate	Balance
Intermediate:			
1995-2019	12.68	12.38	0.31
2020-2044	13.06	16.95	–3.89
2045-2069	13.25	18.22	–4.98
Low Cost:			
1995-2019	12.64	10.99	1.65
2020-2044	12.92	13.80	–.88
2045-2069	13.00	13.22	–.22
High Cost:			
1995-2019	12.73	13.91	–1.18
2020-2044	13.23	20.63	–7.40
2045-2069	13.60	25.49	–11.89

A surplus is shown under the intermediate alternative II assumptions for the first subperiod only; thereafter, the program is projected to experience substantial deficits, for the reasons outlined previously. Under the low cost alternative I assumptions, summarized tax income would exceed summarized costs for the first 25-year subperiod only, with deficits diminishing to relatively low levels in the third period. (The less favorable outlook for the second subperiod occurs under the low cost assumptions because the "baby-boom" generation is retired essentially throughout this period, while the assumed higher ultimate fertility rates have not yet had their full effect on the estimated numbers of workers.) If the high cost conditions of alternative III are experienced, substantial deficits would occur for all three subperiods.

To assess the overall financial balance for the long range, it is customary to calculate summarized income rates and cost rates for the full 75-year period. For this purpose, summarized income and cost rates are calculated on a present-value basis, as before. In addition, the summarized income rate is augmented by the value of trust fund assets on hand at the beginning of the period. Similarly, the sum-

marized cost rate is adjusted to include the additional cost of accumulating trust fund assets at the end of the period equal to 100 percent of the following year's expenditures. The results of this calculation are shown in the following table.

	Income rate	Cost rate	Balance
Intermediate:			
1995-2069	13.27	15.44	–2.17
Low Cost:			
1995-2069	13.13	12.59	.54
High Cost:			
1995-2069	13.44	19.11	–5.67

The difference between the summarized income and cost rates is called the "actuarial balance" and ranges from a surplus of 0.54 percent of taxable payroll under the low cost assumptions to a deficit of 5.67 percent under the high cost assumptions. Based on the intermediate assumptions, an actuarial deficit of 2.17 percent is projected, representing the difference between the summarized income rate of 13.27 percent and the corresponding cost rate of 15.44 percent.

The estimated actuarial deficit is slightly larger than the corresponding deficit of 2.13 percent of payroll in last year's report. If the only change for this year's report were to change the long-range valuation period from 1994-2068 to 1995-2069, the deficit for this year's report would have risen to 2.20 percent of payroll. Thus, the net effect of updated assumptions and methods for this year's report was to slightly improve the financial status of the program on a year by year basis. See section II.F2g for complete details on the change in actuarial balance from last year's report.

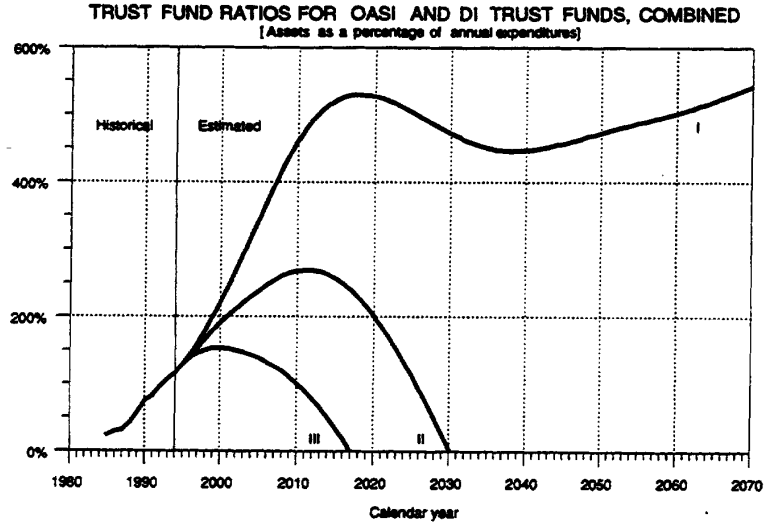
The size of the actuarial balance for any period represents a measure of the program's financial adequacy for that period. The actuarial balance can be interpreted as the amount of change which, if made to the payroll tax rates scheduled under present law for each year in the period, would bring the program into exact actuarial balance. For example, if the 75-year actuarial deficit of 2.17 percent under intermediate assumptions were addressed by raising scheduled tax rates by 1.09 percent for employees and employers, each, and by 2.18 percent for the self-employed, then OASDI assets at the beginning of 1995, together with income from payroll taxes, interest, and other sources, would be just sufficient to meet all expenditures for the period and leave a trust fund level at the end of the period equal to

about 100 percent of the following year's expenditures. Of course, there are numerous other changes to tax rates or benefit provisions that could also result in the elimination of the long-range actuarial deficit.

The 75-year actuarial balance is a convenient and widely used measure of the OASDI program's overall financial status. It is important to remember, however, that this summary measure reflects the combined effects of several very different periods, as previously described. Thus, while the use of summary measures such as the actuarial balance is often convenient, such measures should not be used as a substitute for a more complete understanding of the underlying year-by-year outlook.

3. Trust Fund Ratios

As noted previously, the total income of the OASDI program currently exceeds total expenditures by a substantial margin. As a result, the assets of the combined trust funds are increasing rapidly. Under the intermediate alternative II assumptions, tax income is expected to exceed expenditures for about 12 years after the turn of the century, when the cost of the program will have started to increase with the retirement of the "baby-boom" generation. Thereafter, the tax rates scheduled in present law are expected to be insufficient to cover program expenditures and it will be necessary to use interest earned by the combined OASI and DI Trust Funds to make up the shortfall. Total income, including interest earnings, is expected to exceed expenditures through about 2019. Thereafter, it will be necessary to redeem assets to make up the shortfall. The resulting pattern of combined OASI and DI assets, expressed as a percentage of annual expenditures, is illustrated in the following chart under each of the three alternative sets of assumptions.



At the beginning of 1995, the combined assets of the OASI and DI Trust Funds represented about 128 percent of combined annual expenditures estimated for the year. Under alternatives I and II, this ratio would increase rapidly for at least the next 15 years. Based on the intermediate assumptions, assets would accumulate to a peak of 269 percent of expenditures in 2011, and would then decline steadily until exhaustion in the year 2030. Based on the intermediate estimates in last year's report, the peak fund ratio for the combined funds was estimated to be 241 percent and the year of exhaustion was estimated to be 2029. Even though the actuarial deficit is slightly larger than in last year's report, the year of exhaustion is later and the peak trust fund ratio is higher than in last year's report for the reasons indicated in the prior section.

For OASI and DI, separately, the peak fund ratios based on the intermediate assumptions are 311 and 142 percent, respectively, in this year's report and 361 percent and 23 percent, respectively, in last year's report. The reduction in the maximum fund ratio for OASI, as well as the increase for DI, results largely from the tax rate reallocation enacted since last year's report. The following table summarizes the projections in this year's report for OASI, DI, and the

combined trust funds under the three sets of assumptions for the period 1995 through 2070.

	OASI	DI	Combined
Intermediate:			
Maximum trust fund ratio (percent)	311	142	269
Year attained	2012	2003	2011
Year of exhaustion	2031	2016	2030
Low Cost:			
Maximum trust fund ratio (percent)	534	1,762	542
Year attained	2017	2070	2070
Year of exhaustion	—	—	—
High Cost:			
Maximum trust fund ratio (percent)	170	92	153
Year attained	2003	1997	2000
Year of exhaustion	2020	2004	2016

Under the low cost alternative I assumptions, the trust fund ratio roughly levels off during the retirement years of the "baby-boom" generation, but resumes increasing by 2040, even though annual balances are negative. This occurs because the assumed trust fund interest rates are high enough to offset the small annual deficits and still keep the trust funds growing faster than annual outgo. For the high cost alternative III, the combined trust fund is permanently exhausted in 2016.

Trust fund assets are generally invested in special Treasury securities so that the excess of cash receipts over expenditures are borrowed from the trust funds by the general fund of the Treasury and used to help meet various Federal outlays. These securities are backed by the full faith and credit of the U.S. Government, the same as other public-debt obligations of the U.S. Government. The assets of the trust funds can be redeemed for cash at any time if required to meet program expenditures. The redemption of a Treasury security held by a trust fund requires that the Treasury transfer cash—obtained from another revenue source, such as income taxes or borrowing from the public—to the trust fund. Thus, the investment operations of the trust funds result in various cash flows between the trust funds and the general fund of the Treasury.

Under the intermediate assumptions, the excess of OASDI income over outgo during the next 18 years will result in a substantial net cash flow from the trust funds of amounts borrowed by the general fund. Thereafter, this cash flow is expected to reverse; as trust fund securities are redeemed to meet benefit payments and other ex-

penditures, revenue from the general fund of the Treasury will be drawn upon to provide the necessary cash. The accumulation and subsequent redemption of substantial trust fund assets has important economic and public policy implications that go well beyond the operation of the OASDI program itself. Discussion of these broader issues is not within the scope of this report.

4. Test of Long-Range Close Actuarial Balance

Because the OASI and DI programs, both separately and combined, have actuarial deficits that are more than 5 percent of the corresponding summarized cost rates over the next 75 years under the Trustees' intermediate (alternative II) assumptions, they do not meet the requirements of the Trustees' formal test for long-range close actuarial balance. (This test is described in detail in the section entitled "Actuarial Estimates" later in this report.)

I. CONCLUSION

The combined OASI and DI Trust Funds are adequately financed over the next 10 years, and for many years thereafter. At the beginning of 1995, the combined assets of the trust funds represented 128 percent of combined expenditures for 1995. The combined funds are projected to continue to grow during the next 10 years, and for many years thereafter, under both the intermediate and low cost assumptions. However, while the assets of the combined funds, in nominal dollars, continue to grow under the high cost assumptions for the next 10 years, 1995 through 2004, the trust fund ratio of assets to annual expenditures begins to decline in 2000.

The OASI Trust Fund is expected to grow rapidly during the next 10 years from a current level of 139 percent of annual outgo to about 2.5 times annual outgo by the year 2004, based on the intermediate assumptions. Thus, the OASI Trust Fund meets the criteria for financial adequacy in the short range by a wide margin.

The DI Trust Fund is also adequately financed over the next 10 years. Outgo from the DI Trust Fund exceeded income in both 1992 and 1993. However, these declines were reversed by the reallocation of part of the OASI contribution rate to DI that was enacted in 1994. The assets of the DI fund, in nominal dollars, are now expected to rise throughout the next 10 years, based on both the intermediate and low cost assumptions. The ratio of assets to expenditures is expected to increase from 54 percent at the beginning of 1995 to 142 percent by the beginning of 2003 and then to decline to 140 percent at the beginning of 2004, based on the intermediate assumptions.

Although the combined trust funds are well financed over the first 10 years and are expected to continue growing, in nominal dollars, for the first 25 years under the intermediate assumptions, the OASDI program is not in close actuarial balance over the next 75 years, based on these assumptions. The estimates indicate that the combined trust funds would be sufficient to enable the timely payment of benefits for the next 35 years. Relative to annual expenditures, the combined trust funds would continue to grow during the next 16 years, reaching a peak of about 2.7 times annual expenditures. Considering each fund separately, the OASI Trust Fund would have sufficient funds for the next 36 years, and the DI Trust Fund would be sufficient for the next 21 years. On the basis of the high cost

assumptions, the combined funds would be sufficient to enable timely payment of benefits for about the next 21 years. Based on the low cost assumptions, the combined funds would continue to grow throughout the next 75 years, and they would be sufficient to enable timely payment of benefits during all of the long-range period.

For each of the next 18 years, OASDI income from payroll taxes and income taxes on benefits is expected to exceed total expenditures based on the intermediate assumptions. Starting about 14 years from now, however, OASDI costs as a percentage of taxable payroll are projected to begin increasing rapidly as the "baby-boom" generation reaches retirement age. In contrast, the program's income from payroll taxes and income taxes on benefits will represent a relatively level percentage of taxable payroll.

Therefore, under the intermediate assumptions, the OASDI cost rate is projected to exceed the income rate from 2013 through the end of the projection period, with the shortfall reaching 5.66 percent of taxable payroll by 2069, the end of the 75-year projection period. Based on the less favorable conditions assumed for the high cost estimates, the crossover point would be reached in about 1999, and the shortfall would grow eventually to 14.55 percent of payroll by 2069. With more favorable conditions, such as the low cost assumptions, the cost rate would exceed the income rate in 2021 and later, and the deficit would be 0.06 percent of payroll in the last year of the 75-year period.

Although, under the intermediate assumptions, the OASDI annual balances become negative after the first 18 years, the availability of interest earnings, in addition to tax revenues, results in projected trust fund growth (in dollars) that would continue for another 7 years. Because expenditures are estimated to increase at a faster rate than assets, however, OASDI assets would decline relative to annual disbursements, from about 2.7 times to about 2.0 times annual expenditures, during the same time period.

The actuarial balance of the OASDI program as a whole over the next 75 years is a deficit of 2.17 percent of taxable payroll, based on the intermediate assumptions. The deficit represents about 14 percent of the estimated cost rate over the next 75 years, and is therefore larger than the maximum 5-percent level allowed over that period by the test for close actuarial balance. Furthermore, beginning with

the 1995-2028 period, and for all successively longer periods through the full 75-year period, the actuarial balances are deficits that are larger than the maximum levels allowed for close actuarial balance. Thus, the OASDI program is not in close actuarial balance.

Each trust fund, separately, is also out of close actuarial balance. On the basis of the intermediate assumptions, the OASI Trust Fund has an actuarial deficit of 1.87 percent of taxable payroll for the full 75-year valuation period, representing 14 percent of the OASI long-range cost rate. Similarly, the DI Trust Fund's actuarial deficit of 0.31 percent of taxable payroll represents 14 percent of the DI cost rate.

In view of the lack of close actuarial balance in the OASDI program over the next 75 years, the Board believes that the long-range deficits of both the OASI and DI Trust Funds should be addressed. The Advisory Council on Social Security is conducting an extensive review of Social Security financing issues, and the Board looks forward to receiving the Council's recommendations for restoring the long-range actuarial balance of the OASDI program.

II. ACTUARIAL ANALYSIS

A. SOCIAL SECURITY AMENDMENTS SINCE THE 1994 REPORT

Since the 1994 Annual Report was transmitted to the Congress on April 11, 1994, three laws affecting the OASDI program in a significant way have been enacted. The more important legislative changes, from an actuarial standpoint, are described below.

The Social Security Independence and Program Improvements Act of 1994 (Public Law 103-296, signed on August 15, 1994) established the Social Security Administration as an independent agency, effective March 31, 1995. Under the new law, the Commissioner of Social Security is appointed by the President and confirmed by the Senate to serve a 6-year term. The law also provides for Presidential appointment and Senate confirmation of a Deputy Commissioner to serve a 6-year term. The initial term of office for both the Commissioner and the Deputy Commissioner will end January 19, 2001.

The law provides that the Commissioner of Social Security, who previously served as Secretary of the Board of Trustees, is a member of the Board and that the Deputy Commissioner is Secretary of the Board.

The law includes several additional provisions that affect the trust funds from a financial standpoint. Among the most significant of these changes are:

1. Restrictions, generally effective 180 days after enactment, were placed on Social Security disability insurance benefit payments to individuals disabled by drug addiction and alcoholism. Among the provisions affecting these individuals were: time limiting benefits and payments to 36 months; suspending benefits for non-compliance with treatment for substance abuse; strengthening representative payee requirements; imposing treatment requirements on DI beneficiaries; establishing referral and monitoring agreements in all States; and generally requiring gradual payment of any retroactive benefits due to substance abusers.

2. The amount State and local election officials and election workers must be paid for the earnings to be covered under Social

Security was increased from $100 to $1000 a year, effective January 1, 1995. Beginning in the year 2000, the coverage threshold is scheduled to increase automatically as wage levels rise.

3. In calculating increases in the OASDI contribution and benefit base and the earnings test exempt amounts for all years after 1994, the base year used in calculating the increases is designated as 1994. Since increases in the base and exempt amounts will no longer depend on the rounded amounts applicable in the previous year, distortion in these amounts which could occur over time is eliminated.

The Social Security Domestic Employment Reform Act of 1994 (Public Law 103-387, signed on October 22, 1994) included a number of provisions affecting the OASDI program. The more important legislative changes, from an actuarial standpoint are:

1. A greater portion of the OASDI tax rate, which is 6.20 percent for employees and employers, each, was allocated to the DI Trust Fund effective with respect to wages paid after December 31, 1993, and to self-employment income for taxable years beginning after such date. For 1994 through 1996, the rate allocated to the DI Trust Fund was increased from 0.60 percent to 0.94 percent for employees and employers, each. (The reallocation resulted in transfers of taxes from the OASI Trust Fund to the DI Trust Fund in October and November 1994 for the retroactive period.) For 1997 through 1999, the DI rate was increased from 0.60 percent to 0.85 percent, each. Beginning with the year 2000, the DI Trust Fund allocation was increased from 0.71 percent to 0.90 percent.

2. The coverage threshold for domestic employees' earnings paid per employer was raised from $50 per calendar quarter to $1,000 annually in calendar year 1994. In cases where domestic employees were paid less than $1,000 in 1994, their employers must report the earnings on form W-2 and the employees will receive credit under Social Security for wages. However, no Social Security taxes are payable on these wages.

   In calendar years after 1995, the $1,000 coverage threshold will increase in $100 increments as average wages increase.

3. The prisoner nonpayment provision already in the law was

> extended to all individuals confined to a jail, prison, or other penal institution or correctional facility pursuant to a conviction of a crime punishable by imprisonment for more than 1 year (regardless of the actual sentence imposed). Suspension will also apply to beneficiaries confined by court order in an institution at public expense in connection with a finding that the individual is: guilty but insane, with respect to an offense punishable by imprisonment for more than 1 year; not guilty of such an offense by reason of insanity or by reason of similar factors (such as a mental disease, a mental defect, or mental incompetence); or incompetent to stand trial for such an offense.

The Uruguay Round Agreements Act (Public Law 103-465, signed on December 8, 1994) included a provision that increased from 50 to 85 percent the amount of Social Security benefits which are subject to mandatory Federal income tax withholding because they are paid to nonresident aliens. This provision applies to benefits paid in taxable years ending after December 31, 1994.

The actuarial estimates shown in this report reflect the anticipated effects of these changes.

B. DESCRIPTION OF THE TRUST FUNDS

The Federal Old-Age and Survivors Insurance Trust Fund was established on January 1, 1940, as a separate account in the United States Treasury. All the financial operations of the OASI program are handled through this fund. The Federal Disability Insurance Trust Fund is another separate account in the United States Treasury; it was established on August 1, 1956. All the financial operations of the DI program are handled through this fund.

The primary receipts of these two funds are amounts appropriated to each of them under permanent authority on the basis of contributions payable by workers, their employers, and individuals with self-employment income, in work covered by the OASDI program. All employees, and their employers, in covered employment are required to pay contributions with respect to their wages. Employees, and their employers, are also required to pay contributions with respect to cash tips, if the individual's monthly cash tips amount to at least $20. All self-employed persons are required to pay contributions with respect to their covered net earnings from self-employment. In addition to paying the required employer contributions on the wages of covered Federal employees, the Federal Government also pays amounts equivalent to the combined employer and employee contributions that would be paid on deemed wage credits attributable to military service performed after 1956 if such wage credits were covered wages.

In general, an individual's contributions, or taxes, are computed on wages or net earnings from self-employment, or both wages and net self-employment earnings combined, up to a specified maximum annual amount. The contributions are determined first on the wages and then on any net self-employment earnings, such that the total does not exceed the annual maximum amount. An employee who pays contributions on wages in excess of the annual maximum amount (because of employment with two or more employers) is eligible for a refund of the excess employee contributions.

The monthly benefit amount to which an individual (or his or her spouse and children) may become entitled under the OASDI program is based on the individual's taxable earnings during his or her lifetime. For almost all persons who first become eligible to receive

benefits in 1979 or later, the earnings used in the computation of benefits are indexed to reflect increases in average wage levels.

The contribution, or tax, rates applicable in each calendar year and the allocation of these rates between the OASI and DI Trust Funds are shown in table II.B1.

For 1996 and later, the rates shown in table II.B1 are those scheduled in present law. (The total contribution rates for the OASDI and Hospital Insurance (HI) programs combined, and for each program separately, are shown in appendix A, table III.A1.) The maximum amount of earnings on which OASDI contributions are payable in a year, which is also the maximum amount of earnings creditable in that year for benefit-computation purposes, is called the contribution and benefit base. The contribution and benefit base for each year through 1995 is also shown in table II.B1.

TABLE II.B1.—CONTRIBUTION AND BENEFIT BASE AND CONTRIBUTION RATES

Calendar years	Contribution and benefit base	Contribution rates (percent)					
		Employees and employers, each			Self-employed		
		OASDI	OASI	DI	OASDI	OASI	DI
1937-49	$3,000	1.000	1.000	—	—	—	—
1950	3,000	1.500	1.500	—	—	—	—
1951-53	3,600	1.500	1.500	—	2.2500	2.2500	—
1954	3,600	2.000	2.000	—	3.0000	3.0000	—
1955-56	4,200	2.000	2.000	—	3.0000	3.0000	—
1957-58	4,200	2.250	2.000	0.250	3.3750	3.0000	0.3750
1959	4,800	2.500	2.250	.250	3.7500	3.3750	.3750
1960-61	4,800	3.000	2.750	.250	4.5000	4.1250	.3750
1962	4,800	3.125	2.875	.250	4.7000	4.3250	.3750
1963-65	4,800	3.625	3.375	.250	5.4000	5.0250	.3750
1966	6,600	3.850	3.500	.350	5.8000	5.2750	.5250
1967	6,600	3.900	3.550	.350	5.9000	5.3750	.5250
1968	7,800	3.800	3.325	.475	5.8000	5.0875	.7125
1969	7,800	4.200	3.725	.475	6.3000	5.5875	.7125
1970	7,800	4.200	3.650	.550	6.3000	5.4750	.8250
1971	7,800	4.600	4.050	.550	6.9000	6.0750	.8250
1972	9,000	4.600	4.050	.550	6.9000	6.0750	.8250
1973	10,800	4.850	4.300	.550	7.0000	6.2050	.7950
1974	13,200	4.950	4.375	.575	7.0000	6.1850	.8150
1975	14,100	4.950	4.375	.575	7.0000	6.1850	.8150
1976	15,300	4.950	4.375	.575	7.0000	6.1850	.8150
1977	16,500	4.950	4.375	.575	7.0000	6.1850	.8150
1978	17,700	5.050	4.275	.775	7.1000	6.0100	1.0900
1979	22,900	5.080	4.330	.750	7.0500	6.0100	1.0400
1980	25,900	5.080	4.520	.560	7.0500	6.2725	.7775

TABLE II.B1.—CONTRIBUTION AND BENEFIT BASE AND CONTRIBUTION RATES (Cont.)

Calendar years	Contribution and benefit base	Contribution rates (percent)					
		Employees and employers, each			Self-employed		
		OASDI	OASI	DI	OASDI	OASI	DI
1981	$29,700	5.350	4.700	0.650	8.0000	7.0250	0.9750
1982	32,400	5.400	4.575	.825	8.0500	6.8125	1.2375
1983	35,700	5.400	4.775	.625	8.0500	7.1125	.9375
1984[1]	37,800	5.700	5.200	.500	11.4000	10.4000	1.0000
1985[1]	39,600	5.700	5.200	.500	11.4000	10.4000	1.0000
1986[1]	42,000	5.700	5.200	.500	11.4000	10.4000	1.0000
1987[1]	43,800	5.700	5.200	.500	11.4000	10.4000	1.0000
1988[1]	45,000	6.060	5.530	.530	12.1200	11.0600	1.0600
1989[1]	48,000	6.060	5.530	.530	12.1200	11.0600	1.0600
1990	51,300	6.200	5.600	.600	12.4000	11.2000	1.2000
1991	53,400	6.200	5.600	.600	12.4000	11.2000	1.2000
1992	55,500	6.200	5.600	.600	12.4000	11.2000	1.2000
1993	57,600	6.200	5.600	.600	12.4000	11.2000	1.2000
1994	60,600	6.200	5.260	.940	12.4000	10.5200	1.8800
1995	61,200	6.200	5.260	.940	12.4000	10.5200	1.8800
1996	(2)	6.200	5.260	.940	12.4000	10.5200	1.8800
1997-99	(2)	6.200	5.350	.850	12.4000	10.7000	1.7000
2000 and later	(2)	6.200	5.300	.900	12.4000	10.6000	1.8000

[1]In 1984 only, an immediate credit of 0.3 percent of taxable wages was allowed against the OASDI contributions paid by employees, which resulted in an effective contribution rate of 5.4 percent. The appropriations of contributions to the trust funds, however, were based on the combined employee-employer rate of 11.4 percent, as if the credit for employees did not apply. Similar credits of 2.7 percent, 2.3 percent, and 2.0 percent were allowed against the combined OASDI and Hospital Insurance (HI) contributions on net earnings from self-employment in 1984, 1985, and 1986-89, respectively. Beginning in 1990, self-employed persons are allowed a deduction, for purposes of computing their net earnings, equal to half of the combined OASDI and HI contributions that would be payable without regard to the contribution and benefit base. The OASDI contribution rate is then applied to net earnings after this deduction, but subject to the OASDI base.

[2]Subject to automatic adjustment based on increases in average wages.

All contributions are collected by the Internal Revenue Service and deposited in the general fund of the Treasury. The contributions are immediately and automatically appropriated to the trust funds on an estimated basis. The exact amount of contributions received is not known initially because the OASDI and HI contributions and individual income taxes are not separately identified in collection reports received by the Internal Revenue Service. Periodic adjustments are subsequently made to the extent that the estimates are found to differ from the amounts of contributions actually payable as determined from reported earnings. Adjustments are also made to account for any refunds to employees (with more than one employer) who paid contributions on wages in excess of the contribution and benefit base.

From May 1983 through November 1990, amounts representing the

estimated total collections of OASDI contributions for each month were credited to the trust funds on the first day of the month. The "Omnibus Budget Reconciliation Act of 1990" amended the law in effect since 1983 to provide that such advance transfers would be used only if the trust funds drop to such a low level that advance transfers are needed in order to pay benefits.

Beginning in 1984, up to one-half of an individual's or couple's OASDI benefits was subject to Federal income taxation under certain circumstances. Effective for taxable years beginning after 1993, the maximum percentage of benefits subject to taxation was increased from 50 percent to 85 percent. The proceeds from taxation of up to 50 percent of benefits are credited to the OASI and DI Trust Funds in advance, on an estimated basis, at the beginning of each calendar quarter, with no reimbursement to the general fund for interest costs attributable to the advance transfers. (The additional tax revenues resulting from the increase to 85 percent are transferred to the HI Trust Fund.) Subsequent adjustments are made based on the actual amounts as shown on annual income tax records. The amounts appropriated from the general fund of the Treasury are allocated to the OASI and DI Trust Funds on the basis of the income taxes paid on the benefits from each fund. (A special provision applies to benefits paid to non-resident aliens. Under P.L. 103-465, effective for taxable years beginning after 1994, a flat-rate tax, usually 25.5 percent, is withheld from the benefits before they are paid and, therefore, remains in the trust funds. From 1984 to 1994 the flat-rate tax that was withheld was usually 15 percent.)

Another source of income to the trust funds is interest received on investments held by the trust funds. That portion of each trust fund which, in the judgment of the Managing Trustee, is not required to meet current expenditures for benefits and administration is invested, on a daily basis, primarily in interest-bearing obligations of the U.S. Government (including special public-debt obligations described below). Investments may also be made in obligations guaranteed as to both principal and interest by the United States, including certain Federally sponsored agency obligations that are designated in the laws authorizing their issuance as lawful investments for fiduciary and trust funds under the control and authority of the United States or any officer of the United States. These obligations may be acquired on original issue at the issue price or by purchase

of outstanding obligations at their market price. Thus, all of the investments held by the trust funds are backed by the full faith and credit of the U.S. Government.

The Social Security Act authorizes the issuance of special public-debt obligations for purchase exclusively by the trust funds. The Act provides that these obligations shall bear interest at a rate equal to the average market yield (computed on the basis of market quotations as of the end of the calendar month next preceding the date of such issue) on all marketable interest-bearing obligations of the United States then forming a part of the public debt which are not due or callable until after the expiration of 4 years from the end of such calendar month. These special issues are redeemable at all times at par value and thus bear no risk with respect to changes in interest rates (i.e., principal price fluctuations).

Income is also affected by provisions of the Social Security Act for (1) transfers between the general fund of the Treasury and the OASI and DI Trust Funds for any adjustments to prior payments for the cost arising from the granting of noncontributory wage credits for military service prior to 1957, according to periodic determinations made by the Secretary of Health and Human Services; (2) annual reimbursements from the general fund of the Treasury to the OASI Trust Fund for any costs arising from the special monthly cash payments to certain uninsured persons—i.e., those who attained age 72 before 1968 and who generally are not eligible for cash benefits under other provisions of the OASDI program; and (3) the receipt of unconditional money gifts or bequests made for the benefit of the trust funds or any activity financed through the funds.

The primary expenditures of the OASI and DI Trust Funds are for (1) OASDI benefit payments, net of any reimbursements from the general fund of the Treasury for unnegotiated benefit checks, and (2) expenses incurred by the Social Security Administration, the Department of Health and Human Services, and the Department of the Treasury in administering the OASDI program and the provisions of the Internal Revenue Code relating to the collection of contributions. Such administrative expenses include expenditures for construction, rental and lease, or purchase of office buildings and related facilities for the Social Security Administration. The Social Security Act does not permit expenditures from the OASI and DI Trust Funds for any purpose not related to the payment of benefits

or administrative costs for the OASDI program.

The expenditures of the trust funds are also affected by (1) costs of vocational rehabilitation services furnished as an additional benefit to disabled persons receiving cash benefits because of their disabilities where such services contributed to their successful rehabilitation, and (2) the provisions of the Railroad Retirement Act which provide for a system of coordination and financial interchange between the Railroad Retirement program and the Social Security program. Under the latter provisions, transfers between the Railroad Retirement program's Social Security Equivalent Benefit Account and the trust funds are made on an annual basis in order to place each trust fund in the same position in which it would have been if railroad employment had always been covered under Social Security.

The net worth of facilities and other fixed capital assets is not carried in the statements of the operations of the trust funds presented in this report. This is because the value of fixed capital assets does not represent funds available for the payment of benefits or administrative expenditures, and therefore is not considered in assessing the actuarial status of the trust funds.

C. SUMMARY OF THE OPERATIONS OF THE OLD-AGE AND SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST FUNDS, FISCAL YEAR 1994

1. Old-Age and Survivors Insurance Trust Fund

A statement of the income and disbursements of the Federal Old-Age and Survivors Insurance Trust Fund in fiscal year 1994, and of the assets of the fund at the beginning and end of the fiscal year, is presented in table II.C1.

During fiscal year 1994, total receipts amounted to $342.3 billion, and total disbursements were $281.6 billion. The assets of the OASI Trust Fund thus increased by $60.7 billion during the year, to a total of $416.3 billion on September 30, 1994.

Included in total receipts during fiscal year 1994 were $308.8 billion in payroll tax contributions appropriated to the fund. Another $0.3 billion was received from the general fund of the Treasury representing payment for the taxes that would have been paid on estimated deemed wage credits for military service in 1994 if such credits had been considered to be covered wages. (Included in this payment are adjustments for revised estimates of deemed wage credits in prior years.) As an offset to gross contributions, $0.7 billion was transferred from the trust fund to the general fund of the Treasury for the estimated amount of refunds to employees who worked for more than one employer during a year and paid contributions on wages in excess of the contribution and benefit base.

Net payroll tax contributions thus amounted to $308.4 billion, an increase of 7.2 percent over the amount in the preceding fiscal year. This level of growth in contribution income resulted primarily from the effects of increased earnings and the increases in the contribution and benefit base that became effective on January 1 of each year 1993 and 1994. (Table II.B1 in the preceding section shows the tax rates and contribution and benefit bases in effect for these years.[1])

Income from the taxation of benefits amounted to $5.4 billion, of which nearly 99 percent represented amounts credited to the trust fund in advance, on an estimated basis, together with adjustments

[1] A provision of Public Law 103-387, enacted October 22, 1994, provided a reallocation of the OASI and DI tax rates retroactive to January 1, 1994. The reallocation resulted in transfers of taxes from the OASI Trust Fund to the DI Trust Fund in October and November 1994 for the retroactive period. During fiscal year 1994, however, tax income to the trust funds was unaffected by the reallocation of the tax rates.

to 1991 transfers to account for actual experience. The remaining 1 percent of the total income from taxation of benefits represented amounts withheld from the benefits paid to non-resident aliens.

Special payments are made to uninsured persons who either attained age 72 before 1968, or who attained age 72 after 1967 and had 3 quarters of coverage for each year after 1966 and before the year of attainment of age 72. The costs associated with providing such payments to persons having fewer than 3 quarters of coverage are reimbursable from the general fund of the Treasury. Accordingly, a reimbursement of $10,078,000 was transferred to the OASI Trust Fund in fiscal year 1994, as required by section 228 of the Social Security Act. The reimbursement reflected the costs of payments made in fiscal year 1992.

The OASI Trust Fund was credited with interest totaling $28.5 billion which consisted of (1) interest earned on the investments of the trust fund, plus (2) interest on transfers between the trust fund and the general fund account for the Supplemental Security Income program due to adjustments in the allocation of administrative expenses, less (3) interest arising from the revised allocation of administrative expenses among the trust funds.

The remaining $191,113 of receipts consisted of gifts received under the provisions authorizing the deposit of money gifts or bequests in the trust funds.

Of the $281.6 billion in total disbursements, $276.3 billion was for net benefit payments. The amount of net benefit payments in fiscal year 1994 represents an increase of 4.4 percent over the corresponding amount in fiscal year 1993. This increase was due primarily to (1) the automatic cost-of-living benefit increases of 3.0 percent and 2.6 percent which became effective for December 1992 and December 1993 respectively, under the automatic-adjustment provisions in section 215(i) of the Social Security Act, (2) an increase in the total number of beneficiaries, and (3) an increase in the average benefit amount resulting from the rising level of earnings.

Actuarial Analysis

TABLE II.C1.—STATEMENT OF OPERATIONS OF THE OASI TRUST FUND DURING FISCAL YEAR 1994

[In thousands]

Total assets, September 30, 1993		$355,643,918
Receipts:		
Contributions:		
Employment taxes	$308,837,427	
Payments from general fund of the Treasury representing employee-employer contributions on deemed wage credits for military service	304,210	
Gross contributions	309,141,637	
Less payment to the general fund of the Treasury for contributions subject to refund	744,940	
Net contributions		308,396,697
Income from taxation of benefit payments:		
Withheld from benefit payments to non-resident aliens	79,429	
All other, not subject to withholding	5,272,000	
Total income from taxation of benefits		5,351,429
Reimbursement from general fund of the Treasury for costs of payments to uninsured persons who attained age 72 before 1968		10,078
Investment income and interest adjustments:		
Interest on investments	28,499,838	
Interest on transfers to the general fund account for the Supplemental Security Income program due to adjustment in allocation of administrative expenses	5,894	
Gross investment income and interest adjustments	28,505,732	
Less interest on interfund transfers due to adjustment in allocation of administrative expenses	1,110	
Net investment income and interest adjustments		28,504,622
Gifts		191
Total receipts		342,263,017
Disbursements:		
Benefit payments:		
Gross benefit payments	277,094,415	
Less collected overpayments	769,405	
Less reimbursement from general fund for unnegotiated checks	46,752	
Net benefit payments		276,278,257
Transfer to the Railroad Retirement "Social Security Equivalent Benefit Account"		3,419,562
Administrative expenses:		
Department of Health and Human Services	1,699,640	
Department of the Treasury	175,417	
Gross administrative expenses	1,875,057	
Less reimbursements from general fund of the Treasury for costs of furnishing information on deferred vested pension benefits	725	
Less receipts from sales of supplies, materials, etc.	493	
Net administrative expenses		1,873,840
Total disbursements		281,571,659
Net increase in assets		60,691,358
Total assets, September 30, 1994		416,335,276

Note: Totals do not necessarily equal the sums of rounded components.

As described in the preceding section, certain provisions of the Railroad Retirement Act coordinate the Railroad Retirement and OASDI programs and govern the financial interchanges arising from the

allocation of costs between the two programs. Under those provisions, the Railroad Retirement Board and the Secretary of Health and Human Services determined that a transfer of $3.4 billion to the Social Security Equivalent Benefit Account from the OASI Trust Fund was required in June 1994.

The remaining $1.9 billion of disbursements from the OASI Trust Fund represented net administrative expenses. The expenses of administering the OASDI and Medicare programs are allocated and charged directly to each of the various trust funds, through which those programs are financed, on the basis of provisional estimates. Similarly, the expenses of administering the Supplemental Security Income program are also allocated and charged directly to the general fund of the Treasury on a provisional basis. Periodically, as actual experience develops and is analyzed, adjustments to the allocations of administrative expenses for prior periods are effected by interfund transfers and transfers between the OASI Trust Fund and the general fund account for the Supplemental Security Income program, with appropriate interest adjustments.

Section 1131 of the Social Security Act authorizes annual reimbursements from the general fund of the Treasury to the OASI Trust Fund for additional administrative expenses incurred as a result of furnishing information on deferred vested benefits to pension plan participants, as required by the Employee Retirement Income Security Act of 1974 (Public Law 93-406). The reimbursement in fiscal year 1994 amounted to $725,203.

The assets of the OASI Trust Fund at the end of fiscal year 1994 totaled $416.3 billion, consisting of $413.4 billion in U.S. Government obligations and an undisbursed balance amounting to $2.9 billion. (The unusually large undisbursed balance was due to tax income received on September 30 but not invested until the following business day.) Table II.C2 shows the total assets of the fund and their distribution at the end of each fiscal year 1993 and 1994.

TABLE II.C2.—ASSETS OF THE OASI TRUST FUND, BY TYPE, INTEREST RATE, AND YEAR OF MATURITY, AT END OF FISCAL YEAR, 1993 AND 1994

	September 30, 1993	September 30, 1994
Obligations sold only to the trust funds (special issues):		
Certificates of indebtedness:		
5.625 percent, 1994	$19,111,890,000.00	—
5.875 percent, 1994	1,929,868,000.00	—
7.250 percent, 1995	—	$20,159,867,000.00
7.375 percent, 1995	—	238,149,000.00
Bonds:		
6.250 percent, 1995	3,150,975,000.00	—
6.250 percent, 1996-2006	34,660,725,000.00	34,660,725,000.00
6.250 percent, 2007	3,150,974,000.00	3,150,974,000.00
6.250 percent, 2008	23,350,034,000.00	23,350,034,000.00
7.250 percent, 1996-98	—	11,884,671,000.00
7.250 percent, 1999-2006	—	31,692,448,000.00
7.250 percent, 2007-08	—	7,923,114,000.00
7.250 percent, 2009	—	27,311,591,000.00
7.375 percent, 1995	3,575,473,000.00	—
7.375 percent, 1996-2000	17,877,365,000.00	17,877,365,000.00
7.375 percent, 2001-06	21,452,844,000.00	21,452,844,000.00
7.375 percent, 2007	20,199,060,000.00	20,199,060,000.00
8.125 percent, 1995	3,611,349,000.00	—
8.125 percent, 1996-2000	18,056,745,000.00	18,056,745,000.00
8.125 percent, 2001-05	18,056,740,000.00	18,056,740,000.00
8.125 percent, 2006	16,623,586,000.00	16,623,586,000.00
8.375 percent, 1995	313,295,000.00	—
8.375 percent, 1996-2000	1,566,475,000.00	1,566,475,000.00
8.375 percent, 2001	2,370,396,000.00	2,370,396,000.00
8.625 percent, 1995	1,301,731,000.00	—
8.625 percent, 1996-2001	7,810,386,000.00	7,810,386,000.00
8.625 percent, 2002	3,672,127,000.00	3,672,127,000.00
8.75 percent, 1994	3,270,042,000.00	—
8.75 percent, 1995	7,099,802,000.00	6,366,877,000.00
8.75 percent, 1996-2000	35,499,010,000.00	35,499,010,000.00
8.75 percent, 2001-03	21,299,409,000.00	21,299,409,000.00
8.75 percent, 2004-05	26,024,476,000.00	26,024,476,000.00
9.25 percent, 1994	2,240,309,000.00	—
9.25 percent, 1995-2000	13,441,854,000.00	13,441,854,000.00
9.25 percent, 2001-02	4,480,616,000.00	4,480,616,000.00
9.25 percent, 2003	5,912,435,000.00	5,912,435,000.00
10.375 percent, 1994	565,186,000.00	—
10.375 percent, 1995-99	2,825,930,000.00	2,825,930,000.00
10.375 percent, 2000	2,057,101,000.00	2,057,101,000.00
10.750 percent, 1994	1,022,231,000.00	—
10.750 percent, 1995-96	2,044,462,000.00	2,044,462,000.00
10.750 percent, 1997-98	2,044,460,000.00	2,044,460,000.00
13.750 percent, 1994	469,684,000.00	—
13.750 percent, 1995-96	939,368,000.00	939,368,000.00
13.750 percent, 1997-98	939,370,000.00	939,370,000.00
13.750 percent, 1999	1,491,915,000.00	1,491,915,000.00
Total investments	355,509,698,000.00	413,424,580,000.00
Undisbursed balances[1]	134,219,942.72	2,910,696,014.25
Total assets	355,643,917,942.72	416,335,276,014.25

[1] The relatively large amount for September 30, 1994, is due to employment taxes received that day that were not invested until the next business day.

Note: Special issues are always purchased at par value. Therefore, book value and par value are the same for each special issue, and the common value is shown above. Where the maturity years are grouped, the amount maturing in each year is the amount shown divided by the number of years.

All securities held by the trust funds are backed by the full faith and credit of the United States Government. Those currently held by the OASI Trust Fund are special issues (i.e., securities sold only to the

trust funds). These are of two types: short-term certificates of indebtedness and long-term bonds. The certificates of indebtedness are issued through the investment of receipts not required to meet current expenditures, and they mature on the next June 30 following the date of issue. Special-issue bonds, on the other hand, are normally acquired only when special issues of either type mature on June 30. The amount of bonds acquired on June 30 is equal to the amount of special issues maturing, less amounts required to meet expenditures on that day.

The effective annual rate of interest earned by the assets of the OASI Trust Fund during calendar year 1994 was 8.0 percent, as compared to 8.3 percent earned during calendar year 1993. The interest rate on special issues purchased by the trust fund in June 1994 was 7.25 percent, payable semiannually. Special-issue bonds with a total par value of $82.8 billion were purchased in June 1994.

Section 201(d) of the Social Security Act provides that the public-debt obligations issued for purchase by the OASI and DI Trust Funds shall have maturities fixed with due regard for the needs of the funds. The usual practice in the past has been to spread the holdings of special issues, as of each June 30, so that the amounts maturing in each of the next 15 years are approximately equal. Accordingly, the amounts and maturity dates of the special-issue bonds purchased on June 30, 1994, were selected in such a way that the maturity dates of the total portfolio of special issues were spread evenly over the 15-year period 1995-2009.

Actuarial Analysis

2. Disability Insurance Trust Fund

A statement of the income and disbursements of the Federal Disability Insurance Trust Fund during fiscal year 1994, and of the assets of the fund at the beginning and end of the fiscal year, is presented in table II.C3.

During fiscal year 1994, total receipts amounted to $34.0 billion, and total disbursements were $38.0 billion. The assets of the trust fund thus decreased by $3.9 billion during the year, to a total of $6.4 billion on September 30, 1994.

Included in total receipts were $33.1 billion representing payroll tax contributions appropriated to the fund and $32,516,000 in payments from the general fund of the Treasury representing taxes that would have been paid on estimated deemed wage credits for military service in 1994 if such credits had been considered to be covered wages. As an offset, $79,940,000 was transferred from the trust fund to the general fund of the Treasury for the estimated amount of refunds to employees who worked for more than one employer during a year and paid contributions on wages in excess of the contribution and benefit base.

Net contributions amounted to $33.0 billion, an increase of 7.2 percent from the amount in the preceding fiscal year. This increase is primarily attributable to the same factors, insofar as they apply to the DI program, that accounted for the change in contributions to the OASI Trust Fund. Income from the taxation of benefit payments amounted to $0.3 billion in fiscal year 1994.

Interest totaling $0.7 billion consisted of interest on the investments of the fund and interest on amounts of interfund transfers.

Of the $38.0 billion in total disbursements, $36.8 billion was for net benefit payments. This represents an increase of 9.6 percent over the corresponding amount of benefit payments in fiscal year 1993. This increase is due in part to the same factors that resulted in the net increase in benefit payments from the OASI Trust Fund. In the case of DI, however, the number of persons receiving disabled worker benefits continued to increase rapidly in 1994. Section II.F1. presents a more detailed discussion of this rapid growth.

TABLE II.C3.—STATEMENT OF OPERATIONS OF THE DI TRUST FUND DURING FISCAL YEAR 1994

[In thousands]

Total assets, September 30, 1993		$10,305,117
Receipts:		
Contributions:		
Employment taxes	$33,088,320	
Payments from general fund of the Treasury representing employee-employer contributions on deemed wage credits for military service	32,516	
Gross contributions	33,120,836	
Less payment to the general fund of the Treasury for contributions subject to refund	79,940	
Net contributions		33,040,896
Income from taxation of benefit payments:		
Withheld from benefit payments to non-resident aliens	3,990	
All other, not subject to withholding	301,000	
Total income from taxation of benefits		304,990
Investment income and interest adjustments:		
Interest on investments	697,549	
Interest on interfund transfers due to adjustment in allocation of administrative expenses	975	
Total investment income and interest adjustments		698,524
Total receipts		34,044,410
Disbursements:		
Benefit payments:		
Gross benefit payments	36,972,334	
Less collected overpayments	142,853	
Less net reimbursement from general fund for unnegotiated checks	11,693	
Net benefit payments		36,817,788
Transfer to the Railroad Retirement "Social Security Equivalent Benefit Account"		105,955
Payment for costs of vocational rehabilitation services for disabled beneficiaries		33,449
Administrative expenses:		
Department of Health and Human Services	989,858	
Department of the Treasury	28,363	
Demonstration projects and experiments	3,785	
Gross administrative expenses	1,022,006	
Less receipts from sales of supplies, materials, etc.	134	
Net administrative expenses		1,021,872
Total disbursements		37,979,064
Net increase in assets		-3,934,654
Total assets, September 30, 1994		6,370,463

Note: Totals do not necessarily equal the sums of rounded components.

Provisions governing the financial interchanges between the Railroad Retirement and OASDI programs are described in the preceding section. Under those provisions, $105,955,000 was transferred to the Social Security Equivalent Benefit Account from the DI Trust Fund in June 1994.

The remaining disbursements amounted to $1.0 billion for net administrative expenses (including $3,785,237 for demonstration projects

and experiments to test the effect of alternative methods for assisting disabled beneficiaries' attempts to work), and $33,448,809 for the costs of vocational rehabilitation services furnished to disabled-worker beneficiaries and to those children of disabled workers who were receiving benefits on the basis of disabilities that began before age 22. Reimbursement from the trust funds for the costs of such services is made only in those cases where the services contributed to the successful rehabilitation of the beneficiaries.

The assets of the DI Trust Fund at the end of fiscal year 1994 totaled $6.4 billion, consisting of $6.1 billion in U.S. Government obligations and an undisbursed balance amounting to $0.3 billion. Table II.C4 shows the total assets of the fund and their distribution at the end of each fiscal year 1993 and 1994.

The effective annual rate of interest earned by the assets of the DI Trust Fund during calendar year 1994 was 8.2 percent, as compared to 8.6 percent earned during calendar year 1993. The interest rate on public-debt obligations issued for purchase by the trust fund in June 1994 was 7.25 percent, payable semiannually. Special-issue bonds with a total par value of $2.2 billion were purchased in June 1994. In compliance with the legal requirement to fix maturities with due regard for the needs of the funds, the usual practice of spreading the holdings of special issues, as described earlier, was not followed. Because the amount of bonds purchased was less than one month's benefit payments and the fund was expected to decline in the absence of remedial legislation, the bonds were purchased with a one-year maturity and were redeemed in July 1994. [1]

The investment policies and practices described for the OASI Trust Fund apply as well to the investment of the assets of the DI Trust Fund.

[1] By law, the interest rate payable on new special-issue bonds is established using a formula that is independent of the maturity dates of the bonds. Thus, the purchase of one-year securities rather than a mix of one- to fifteen-year securities did not have any effect on the interest rates payable on these bonds. As noted, all carried a rate of 7.25 percent, the same rate payable on the longer-term securities purchased in June 1994 for the OASI Trust Fund.

TABLE II.C4.—ASSETS OF THE DI TRUST FUND, BY TYPE, INTEREST RATE, AND YEAR OF MATURITY, AT END OF FISCAL YEAR, 1993 AND 1994

	September 30, 1993	September 30, 1994
Investments in public-debt obligations:		
Public issues:		
Treasury bonds:		
3.5 percent 1998	$5,000,000.00	$5,000,000.00
7.625 percent, 2002-07	10,000,000.00	10,000,000.00
8 percent, 1996-2001	26,000,000.00	26,000,000.00
8.25 percent, 2000-05	3,750,000.00	3,750,000.00
11.75 percent, 2005-10	30,250,000.00	30,250,000.00
Total investments in public issues at par value, as shown above	75,000,000.00	75,000,000.00
Unamortized premium or discount, net	-332,669.47	-299,362.63
Total investments in public issues at book value	74,667,330.53	74,700,637.37
Obligations sold only to the trust funds (special issues):		
Certificates of indebtedness:		
5.625 percent, 1994	1,597,501,000.00	—
7.250 percent, 1995	—	1,773,911,000.00
Bonds:		
7.375 percent, 1999-2003	238,005,000.00	—
7.375 percent, 2004-06	142,803,000.00	142,803,000.00
7.375 percent, 2007	916,460,000.00	916,460,000.00
8.125 percent, 1999-2000	300,320,000.00	—
8.125 percent, 2001-03	450,483,000.00	—
8.125 percent, 2004-05	300,322,000.00	300,322,000.00
8.125 percent, 2006	868,859,000.00	868,859,000.00
8.375 percent, 1999-2000	403,534,000.00	—
8.375 percent, 2001	591,226,000.00	—
8.75 percent, 1999-2000	254,946,000.00	—
8.75 percent, 2001	127,472,000.00	—
8.75 percent, 2002	718,698,000.00	—
8.75 percent, 2003	718,698,000.00	585,085,000.00
8.75 percent, 2004-05	1,437,396,000.00	1,437,396,000.00
10.375 percent, 1998	28,204,000.00	—
10.375 percent, 1999	152,904,000.00	—
10.375 percent, 2000	389,459,000.00	—
10.75 percent 1998	287,955,000.00	—
13.75 percent, 1999	236,555,000.00	—
Total obligations sold only to the trust funds (special issues)	10,161,800,000.00	6,024,836,000.00
Total investments in public-debt obligations (book value[1])	10,236,467,330.53	6,099,536,637.37
Undisbursed balances[2]	68,649,891.20	- 270,926,360.50
Total assets (book value[1])	10,305,117,221.73	6,370,462,997.87

[1]Par value, plus unamortized premium or less discount outstanding.

[2] The relatively large amount for September 30, 1994, is due to employment taxes received that day that were not invested until the next business day.

Note: Special issues are always purchased at par value. Therefore, book value and par value are the same for each special issue, and the common value is shown above. Where the maturity years are grouped for special issues, the amount maturing in each year is the amount shown divided by the number of years.

Actuarial Analysis

3. Old-Age and Survivors Insurance and Disability Insurance Trust Funds, Combined

A statement of the operations of the income and disbursements of the OASI and DI Trust Funds, on a combined basis, is presented in table II.C5. The entries in this table represent the sums of the corresponding values from tables II.C1 and II.C3. For a discussion of the nature of these income and expenditure transactions, reference should be made to the preceding two subsections covering OASI and DI separately.

TABLE II.C5.—STATEMENT OF OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING FISCAL YEAR 1994

[In thousands]

Total assets, September 30, 1993		$365,949,035
Receipts:		
Contributions:		
Employment taxes	$341,925,747	
Payments from general fund of the Treasury representing employee-employer contributions on deemed wage credits for military service	336,726	
Gross contributions	342,262,473	
Less payment to the general fund of the Treasury for contributions subject to refund	824,880	
Net contributions		341,437,593
Income from taxation of benefit payments:		
Withheld from benefit payments to non-resident aliens	83,419	
All other, not subject to withholding	5,573,000	
Total income from taxation of benefits		5,656,419
Reimbursement from general fund of the Treasury for costs of payments to uninsured persons who attained age 72 before 1968		10,078
Investment income and interest adjustments:		
Interest on investments	29,197,387	
Interest on transfers to the general fund account for the Supplemental Security Income program due to adjustment in allocation of administrative expenses	5,894	
Gross investment income and interest adjustments	29,203,281	
Less interest on interfund transfers due to adjustment in allocation of administrative expenses	135	
Net investment income and interest adjustments		29,203,146
Gifts		191
Total receipts		376,307,427
Disbursements:		
Benefit payments:		
Gross benefit payments	314,066,749	
Less collected overpayments	912,258	
Less reimbursement from general fund for unnegotiated checks	58,445	
Net benefit payments		313,096,045
Transfer to the Railroad Retirement "Social Security Equivalent Benefit Account"		3,525,517
Payment for costs of vocational rehabilitation services for disabled beneficiaries		33,449

TABLE II.C5.—STATEMENT OF OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING FISCAL YEAR 1994 (Cont'd)

[In thousands]

Disbursements:(Cont'd)		
Administrative expenses:		
Department of Health and Human Services	$2,689,499	
Department of the Treasury	203,780	
Disability demonstration projects and experiments	3,785	
Gross administrative expenses	2,897,063	
Less reimbursements from general fund of the Treasury for costs of furnishing information on deferred vested pension benefits	725	
Less receipts from sales of supplies, materials, etc.	627	
Net administrative expenses		$2,895,712
Total disbursements		319,550,723
Net increase in assets		56,756,704
Total assets, September 30, 1994		422,705,739

Note: Totals do not necessarily equal the sums of rounded components.

Table II.C6 compares past estimates of contributions and benefit payments for fiscal year 1994, as shown in the 1990-94 Annual Reports, with the corresponding actual amounts in 1994. The estimates shown are the ones based on the alternative II-B set of assumptions from the 1990 report and the alternative II assumptions for subsequent reports.

A number of factors can contribute to differences between estimates and subsequent actual amounts, including actual values for key economic, demographic, and other variables that differ from assumed levels. In addition, amendments to the Social Security Act can cause actual taxes or benefits to vary from earlier estimates. The comparisons in table II.C6 indicate that actual OASI and DI tax contributions in fiscal year 1994 were significantly lower, generally, than estimates in the 1990 and 1991 reports (due primarily to the recession that began late in 1990). Estimates of OASI benefit payments were generally close to actual payments in 1994. The actual amount of DI benefit payments in 1994, however, was significantly above estimates in the 1990-92 reports, due to faster-than-expected growth in the number of disabled workers.

TABLE II.C6.—COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE OASI AND DI TRUST FUNDS, FISCAL YEAR 1994

[Amounts in millions]

	Net contributions[1]		Benefit payments[2]	
	Amount	Difference from actual (percent)	Amount	Difference from actual (percent)
OASI Trust Fund:				
Estimate in 1990 report	$337,015	9.3	$282,788	2.4
Estimate in 1991 report	326,815	6.0	284,069	2.8
Estimate in 1992 report	312,586	1.4	278,643	.9
Estimate in 1993 report	312,084	1.2	278,002	.6
Estimate in 1994 report	306,090	-.7	277,027	.3
Actual amount	308,397	—	276,278	—
DI Trust Fund:				
Estimate in 1990 report	36,107	9.3	31,599	−14.3
Estimate in 1991 report	35,013	6.0	32,826	−10.9
Estimate in 1992 report	33,489	1.4	34,829	−5.5
Estimate in 1993 report	33,436	1.2	37,052	.5
Estimate in 1994 report	32,795	−.7	37,020	.5
Actual amount	33,041	—	36,851	—
OASI and DI Trust Funds, combined:				
Estimate in 1990 report	373,122	9.3	314,387	.4
Estimate in 1991 report	361,828	6.0	316,896	1.2
Estimate in 1992 report	346,075	1.4	313,472	.1
Estimate in 1993 report	345,520	1.2	315,054	.6
Estimate in 1994 report	338,885	−.7	314,047	.3
Actual amount	341,438	—	313,129	—

[1]"Actual" contributions for 1994 reflect adjustments for prior fiscal years (see preceding section for description of these adjustments). "Estimated" contributions also include such adjustments, but on an estimated basis.

[2]Includes payments, if any, for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities.

At the end of fiscal year 1994, about 42.7 million persons were receiving monthly benefits under the OASDI program. Of these persons, about 37.2 million and 5.5 million were receiving monthly benefits from the OASI Trust Fund and the DI Trust Fund, respectively. The number of persons receiving benefits from the OASI and DI Trust Funds grew by 0.8 percent and 6.6 percent, respectively, during the fiscal year. The estimated distribution of benefit payments in fiscal years 1993 and 1994, by type of beneficiary, is shown in table II.C7 for each trust fund separately.

TABLE II.C7.—ESTIMATED DISTRIBUTION OF BENEFIT PAYMENTS FROM THE OASI AND DI TRUST FUNDS, BY TYPE OF BENEFICIARY OR PAYMENT, FISCAL YEARS 1993 AND 1994

[Amounts in millions]

	Fiscal year 1993		Fiscal year 1994	
	Amount	Percentage of total	Amount	Percentage of total
Total OASDI benefit payments	$298,142	100.0	$313,096	100.0
OASI benefit payments	264,561	88.7	276,278	88.2
DI benefit payments	33,581	11.3	36,818	11.8
OASI benefit payments, total	264,561	100.0	276,278	100.0
Monthly benefits:				
Retired workers and auxiliaries	203,920	77.1	212,758	77.0
Retired workers	186,146	70.4	194,407	70.4
Wives and husbands	16,228	6.1	16,733	6.1
Children	1,545	.6	1,619	.6
Survivors of deceased workers	60,425	22.8	63,297	22.9
Aged widows and widowers	48,279	18.2	50,636	18.3
Disabled widows and widowers	788	.3	888	.3
Parents	36	(1)	34	(1)
Children	9,785	3.7	10,189	3.7
Widowed mothers and fathers caring for child beneficiaries	1,537	.6	1,549	.6
Uninsured persons generally aged 72 before 1968	7	(1)	4	(1)
Lump-sum death payments	210	.1	218	.1
DI benefit payments, total	33,581	100.0	36,818	100.0
Disabled workers	30,022	89.4	32,899	89.4
Wives and husbands	569	1.7	576	1.6
Children	2,989	8.9	3,342	9.1

[1] Less than 0.05 percent.

Note: Totals do not necessarily equal the sums of rounded components.

Net administrative expenses charged to the OASI and DI Trust Funds in fiscal year 1994 totaled $2.9 billion. This amount represented 0.8 percent of contribution income and 0.9 percent of expenditures for benefit payments. Corresponding percentages for each trust fund separately and for the OASDI program as a whole are shown in table II.C8 for each of the last 5 years.

TABLE II.C8.—NET ADMINISTRATIVE EXPENSES AS A PERCENTAGE OF CONTRIBUTION INCOME AND OF BENEFIT PAYMENTS, BY TRUST FUND, FISCAL YEARS 1990-94

	OASI Trust Fund		DI Trust Fund		OASI and DI Trust Funds, combined	
Fiscal year	Contribution income	Benefit payments	Contribution income	Benefit payments	Contribution income	Benefit payments
1990	0.6	0.7	2.6	3.0	0.8	0.9
1991	.6	.7	2.7	2.9	.8	1.0
1992	.7	.7	2.8	2.8	.9	.9
1993	.7	.8	3.0	2.8	.9	1.0
1994	.6	.7	3.1	2.8	.8	.9

Tables II.C2 and II.C4, presented in the two preceding subsections, showed the assets of the OASI and DI Trust Funds at the end of fiscal years 1993 and 1994. The changes in the invested assets of the funds between those two dates are a result of the acquisition and disposition of securities during fiscal year 1994. Table II.C9 presents these investment transactions for each trust fund separately and combined. All amounts shown in the table are at par value.

TABLE II.C9.—INVESTMENT TRANSACTIONS OF THE OASI AND DI TRUST FUNDS IN FISCAL YEAR 1994

[In thousands]

	OASI Trust Fund	DI Trust Fund	OASI and DI Trust Funds, combined
Invested assets, September 30, 1993	$355,509,698	$10,236,800	$365,746,498
Acquisitions:			
Special issues:			
Certificates of indebtedness	321,425,736	33,015,931	354,441,667
Bonds	82,773,381	2,157,820	84,931,201
Public issues:			
Treasury bonds	—	—	—
Total acquisitions	404,199,117	35,173,751	439,372,868
Dispositions:			
Special issues:			
Certificates of indebtedness	322,069,478	32,839,521	354,908,999
Bonds	24,214,757	6,471,194	30,685,951
Public issues:			
Treasury bonds	—	—	—
Total dispositions	346,284,235	39,310,715	385,594,950
Net increase in invested assets	57,914,882	-4,136,964	53,777,918
Invested assets, September 30, 1994	413,424,580	6,099,836	419,524,416

Note: All investments are shown at par value.

D. PRINCIPAL ECONOMIC AND DEMOGRAPHIC ASSUMPTIONS

The future income and outgo of the OASDI program depend on many economic and demographic factors, including gross domestic product, labor force, unemployment, average earnings, productivity, inflation, fertility, mortality, net immigration, marriage, divorce, retirement patterns, and disability incidence and termination. The income will depend on how these factors affect the size and composition of the working population and the level and distribution of earnings. Similarly, the outgo will depend on how these factors affect the size and composition of the beneficiary population and the general level of benefits.

Because precise prediction of these various factors is impossible, estimates are shown in this report on the basis of three sets of assumptions, designated as intermediate (alternative II), low cost (alternative I), and high cost (alternative III). The intermediate set, alternative II, represents the Board's best estimate of the future course of the population and the economy. In terms of the net effect on the status of the OASDI program, the low cost alternative I is the more optimistic, and the high cost alternative III is the more pessimistic of the plausible economic and demographic conditions.

The values assumed after the first 5 to 25 years for both the economic and the demographic factors are intended to represent the average experience and are not intended to be exact predictions of year-by-year values. Actual future values will likely exhibit fluctuations or cyclical patterns, as in the past.

Although these sets of economic and demographic assumptions have been developed using the best available information, the resulting estimates should be interpreted with care. In particular, the resulting estimates are not intended to be exact predictions of the future status of the OASDI program, but rather, they are intended to be indicators of the trend and range of future income and outgo, under a variety of plausible economic and demographic conditions.

Actuarial Analysis

1. Economic Assumptions

The principal economic assumptions for the three alternatives are summarized in table II.D1.

TABLE II.D1.—SELECTED ECONOMIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1960-2070

Calendar year	Average annual percentage change in— Real GDP[1]	Average annual wage in covered employment	Consumer Price Index[2]	Real-wage differential[3] (percent)	Average annual interest rate[4] (percent)	Average annual unemployment rate[5] (percent)	Average annual percentage increase in labor force[6]
Historical data:							
1960-64	4.4	3.4	1.3	2.1	3.7	5.7	1.3
1965-69	3.8	6.1	3.4	2.7	5.2	3.8	2.1
1970-74	3.1	6.6	6.1	.5	6.7	5.4	2.3
1975	-.8	6.7	9.1	-2.4	7.4	8.5	1.9
1976	4.9	8.7	5.7	3.0	7.1	7.7	2.4
1977	4.5	7.3	6.5	.8	7.1	7.1	2.9
1978	4.8	9.7	7.7	2.0	8.2	6.1	3.2
1979	2.5	9.8	11.4	-1.6	9.1	5.8	2.6
1980	-.5	9.0	13.4	-4.4	11.0	7.1	1.9
1981	1.8	9.8	10.3	-.5	13.3	7.6	1.6
1982	-2.2	6.5	6.0	.5	12.8	9.7	1.4
1983	3.9	5.1	3.0	2.1	11.0	9.6	1.2
1984	6.2	7.3	3.5	3.8	12.4	7.5	1.8
1985	3.2	4.3	3.5	.8	10.8	7.2	1.7
1986	2.9	5.1	1.6	3.5	8.0	7.0	2.0
1987	3.1	4.7	3.6	1.1	8.4	6.2	1.7
1988	3.9	4.8	4.0	.8	8.8	5.5	1.4
1989	2.5	4.4	4.8	-.4	8.7	5.3	1.8
1990	1.2	5.0	5.2	-.2	8.6	5.5	.7
1991	-.6	[7] 2.9	4.1	-1.2	8.0	6.7	.4
1992	2.3	[7] 5.4	2.9	2.5	7.1	7.4	1.2
1993	3.1	[7] 1.3	2.8	-1.5	6.1	6.8	.7
1994	[7] 4.0	[7] 3.5	2.5	1.0	7.1	6.1	2.2
Intermediate:							
1995	3.0	4.0	3.1	1.0	7.7	5.5	1.3
1996	2.4	4.1	3.2	.9	7.6	5.5	1.0
1997	2.2	4.3	3.3	1.1	7.6	5.5	1.0
1998	2.0	4.1	3.4	.7	7.4	5.6	1.0
1999	1.9	4.2	3.5	.7	7.2	5.7	1.0
2000	1.9	4.5	3.7	.8	7.1	5.8	1.0
2001	2.0	4.7	3.9	.8	7.0	5.9	.9
2002	2.0	4.8	4.0	.8	6.9	6.0	.9
2003	2.0	4.9	4.0	.9	6.7	6.0	.8
2004	2.0	5.1	4.0	1.1	6.5	6.0	.8
2010	1.8	5.1	4.0	1.1	6.3	6.0	.6
2020	1.3	5.0	4.0	1.0	6.3	6.0	.1
2030	1.4	5.0	4.0	1.0	6.3	6.0	.3
2040	1.4	5.0	4.0	1.0	6.3	6.0	.2
2050	1.2	5.0	4.0	1.0	6.3	6.0	.1
2060	1.2	5.0	4.0	1.0	6.3	6.0	.1
2070	1.2	5.0	4.0	1.0	6.3	6.0	.1

TABLE II.D1.—SELECTED ECONOMIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1960-2070 (Cont.)

Calendar year	Average annual percentage change in— Real GDP[1]	Average annual wage in covered employment	Consumer Price Index[2]	Real-wage differential[3] (percent)	Average annual interest rate[4] (percent)	Average annual unemployment rate[5] (percent)	Average annual percentage increase in labor force[6]
Low Cost:							
1995	3.9	4.2	2.7	1.5	7.7	5.3	1.4
1996	3.2	4.2	2.8	1.4	7.5	5.0	1.2
1997	3.0	4.7	3.0	1.7	7.4	4.9	1.2
1998	2.9	4.5	3.0	1.4	7.3	4.8	1.2
1999	2.7	4.5	3.0	1.5	7.2	4.8	1.2
2000	2.6	4.6	3.0	1.6	7.0	4.9	1.1
2001	2.5	4.5	3.0	1.5	6.8	4.9	1.1
2002	2.5	4.4	3.0	1.4	6.6	5.0	1.0
2003	2.4	4.5	3.0	1.5	6.3	5.0	.9
2004	2.4	4.6	3.0	1.6	6.1	5.0	.9
2010	2.3	4.7	3.0	1.7	6.0	5.0	.7
2020	1.9	4.6	3.0	1.6	6.0	5.0	.4
2030	2.1	4.5	3.0	1.5	6.0	5.0	.6
2040	2.2	4.5	3.0	1.5	6.0	5.0	.6
2050	2.1	4.5	3.0	1.5	6.0	5.0	.5
2060	2.2	4.5	3.0	1.5	6.0	5.0	.6
2070	2.1	4.5	3.0	1.5	6.0	5.0	.6
High Cost:							
1995	2.0	3.8	3.6	.2	7.9	5.6	1.2
1996	-.7	3.5	4.0	-.5	7.9	6.5	.7
1997	2.6	6.1	5.4	.7	8.5	6.4	.7
1998	1.1	6.1	6.5	-.4	9.1	6.4	1.0
1999	-1.8	3.8	4.9	-1.1	9.1	7.6	.6
2000	2.9	5.6	5.0	.6	8.6	7.4	.6
2001	2.4	5.2	5.0	.2	7.8	7.1	1.0
2002	1.7	5.1	5.0	.1	7.4	7.0	.8
2003	1.5	5.4	5.0	.4	7.1	7.0	.7
2004	1.5	5.6	5.0	.6	6.7	7.0	.7
2010	1.3	5.5	5.0	.5	6.5	7.0	.5
2020	.8	5.6	5.0	.6	6.5	7.0	-.1
2030	.7	5.6	5.0	.6	6.5	7.0	-.1
2040	.6	5.5	5.0	.5	6.5	7.0	-.2
2050	.3	5.5	5.0	.5	6.5	7.0	-.5
2060	.3	5.5	5.0	.5	6.5	7.0	-.5
2070	.3	5.5	5.0	.5	6.5	7.0	-.5

[1]The real GDP (gross domestic product) is the value of total output of goods and services, expressed in 1987 dollars.

[2]The Consumer Price Index is the annual average value for the calendar year of the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

[3]The real-wage differential is the difference between the percentage increases, before rounding, in (1) the average annual wage in covered employment, and (2) the average annual Consumer Price Index.

[4]The average annual interest rate is the average of the nominal interest rates, which, in practice, are compounded semiannually, for special public-debt obligations issuable to the trust funds in each of the 12 months of the year.

[5]Through 2004, the rates shown are unadjusted civilian unemployment rates. After 2004, the rates are total rates (including military personnel), adjusted by age and sex based on the estimated total labor force for July 1, 1993.

[6]Labor force is the total for the United States (including military personnel) and reflects the average of the monthly numbers of persons in the labor force for each year.

[7]Preliminary. Wages in covered employment are considered preliminary for several years primarily due to uncertainty associated with estimates of amounts above the benefit and contribution base.

Actuarial Analysis

Alternatives I, II, and III present a range of generally consistent sets of economic assumptions which have been designed to encompass most of the possibilities that might be encountered. The intermediate set of assumptions (alternative II) represents the Trustees' consensus expectation of continued moderate to relatively strong economic growth through 1996 and a return to moderate growth thereafter. The low cost assumptions (alternative I) represent a more optimistic outlook, with an indefinite continuation of the more robust economic growth experienced since the fourth quarter of 1991. The high cost assumptions (alternative III) represent a relatively pessimistic forecast in which the economy experiences generally weak economic growth and business cycles with two recessions in the short-range period. Economic cycles are not included in assumptions beyond the first 5 to 10 years of the projection period because inclusion of such cycles has little effect on the long-range estimates of financial status.

A period of sustained real economic growth began in 1982 and ended with the recession that started with the third quarter of 1990. After a total decline in real GDP of 1.6 percent through the first quarter of 1991, and a three-quarter period of slow growth following the recession, the return to steady economic growth which began in 1992 is assumed to continue for alternatives I and II, albeit at a somewhat slower pace. Real growth is assumed to be stronger for alternative I than for alternative II.

For alternative III, moderate growth and an increasing rate of price inflation are assumed through the third quarter of 1995. The first projected recession begins in the fourth quarter of 1995, lasts 3 quarters, and results in a total decline in real GDP of 1.4 percent. After 8 quarters of recovery, a second recession, with a total decline in real GDP of 3.0 percent, is assumed to begin in the third quarter of 1998, lasting 4 quarters. A two-and-one-half-year period of moderately strong economic recovery and stable rates of inflation is assumed through the year 2000. Thereafter, steady, but relatively slow, growth is assumed for alternative III. The total declines in real GDP for the two projected recessions are slightly less than those of recent recessions; however, the duration of recovery between these recessions is assumed to be much shorter than for recoveries experienced in the past 2 decades.

After the year 2004, the projected rates of growth in real GDP, for all three alternatives, are determined by the assumed rates of growth

in employment, average hours worked, and labor productivity. The trend toward slower growth in real GDP after 2004 results primarily from much slower growth in the working age population, as the "baby-boom" generation approaches retirement and succeeding generations reflecting lower birth rates reach working age. Also contributing to the slowdown in growth in real GDP is the assumed leveling of labor force participation rates for women, which have risen substantially over the past 20 years.

Assumed values for the unemployment rates reflect the pattern of real GDP growth for each alternative. For alternatives I and II, the unemployment rate is assumed to move gradually toward ultimate average levels of 5.0 and 6.0 percent, respectively, after 1994. For alternative III, the unemployment rate is assumed to reach its ultimate average level of 7.0 percent after the recovery that is assumed to follow the second projected recession.

Unemployment rates through 2004 are in the most commonly cited form, the civilian rate, which describes the differences between aggregate civilian labor force and aggregate civilian employment. For years after 2004, however, total rates are presented. These include the military (which reduces the rate by about 0.1 percent relative to the civilian rate) and are age-sex adjusted to the 1993 labor force. Such total rates better represent the total population covered by the OASDI program and adjust for the changing age-sex distribution of the labor force, which can obscure the comparison of unemployment rates over different time periods.

Unemployment rates for the years 1994 and later are based on the new survey methodology used by the Bureau of Labor Statistics. Though unemployment rates based on this new method were initially expected to be about 0.5 percentage points higher than if based on the old method, comparisons for 1994 have shown little or no difference.

For the intermediate projection, each of the other economic parameters is selected reflecting what the Trustees believe to be the most likely future course of the economy at the time of preparation of this report, consistent with the assumed pattern of real GDP growth. The annual rate of change in the average wage in covered employment is assumed to rise, generally, from the estimated 3.5-percent increase for 1994, averaging about 4.5 percent for the period 1995 through

2004. Growth in the average wage (which is equal to price inflation plus the real-wage differential) through 2004 averages somewhat less than the ultimate assumed rate of 5.0 percent primarily because price inflation averages less than its ultimate level through this period. Between 2004 and 2015, growth in the average covered wage is slightly higher than the assumed ultimate rate of 5.0 percent, reflecting the gradual movement toward complete inclusion of Federal civilian employees. After 2015, the average covered wage growth rate remains at the ultimate assumed rate of 5.0 percent.

The annual rate of increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) declined from 4.0 percent in 1991 to 2.5 percent in 1994. Thereafter, it is assumed to increase, generally, reaching the ultimate assumed rate of 4.0 percent by the year 2002. The CPI-W (hereinafter denoted as "CPI") is used to determine automatic cost-of-living benefit increases under the OASDI program.

The real-wage differential (i.e., the difference between the annual rates of change in the average wage in covered employment and in the CPI) is estimated to be 1.0 percent in 1994. After 1994, under the intermediate alternative, the real-wage differential is projected to be between 0.7 and 1.1 percent for years 1995 through the year 2015, thereafter remaining at the ultimate assumed differential of 1.0 percent.

Under the intermediate alternative, the average annual interest rate for securities newly issued to the trust funds is assumed to increase from 7.1 percent in 1994 to 7.7 percent for 1995, and decline gradually thereafter, reaching its ultimate value of 6.3 percent by 2005. The annual rate of growth in total labor force increased from 0.7 percent in 1993 to 2.2 percent in 1994. After 1994 the labor force is projected to increase at about 1.0 percent per year, on the average, through 2002, and to increase more slowly thereafter, reflecting the projected slowing of growth in the working-age population as compared with the experience of the 1980s and early 1990s.

For alternatives I and III, respectively, values for each of the economic parameters are selected which, in general, result in a more optimistic and a more pessimistic future financial status of the program.

2. Demographic Assumptions

The principal demographic assumptions for the three alternatives are shown in table II.D2.

For the intermediate projection, the assumed ultimate total fertility rate of 1.9 children per woman is attained in 2019 after a gradual decline from the preliminary estimate for 1994 of 2.06 children per woman. The age-sex-adjusted death rate is assumed to decrease steadily during the entire projection period, with a total reduction of 35 percent from the 1994 level by 2069. Life expectancies at birth in 2070 are 77.7 years for men and 83.8 years for women, compared to 72.1 and 79.0 years, respectively, in 1994. Life expectancies at age 65 in 2070 are projected to be 18.3 years for men and 22.2 years for women, compared to 15.2 and 19.0 years, respectively, in 1994. The projected death rates reflect the effects of assumed cases of Acquired Immunodeficiency Syndrome (AIDS), using estimates prepared by the Centers for Disease Control and Prevention (CDC) as a starting point. Total net immigration is assumed to rise over the next several years reaching an ultimate level of 900,000 persons per year by the year 2000. The ultimate assumed level of net annual immigration is the combination of 650,000 net legal immigrants per year and 250,000 net other-than-legal immigrants per year.

For alternative I, the total fertility rate is assumed to rise to an ultimate average level of 2.2 children per woman by 2019. The age-sex-adjusted death rate is assumed to decrease more slowly than for alternative II, with the total reduction from the 1994 level being 16 percent by 2069. Life expectancies at birth in 2070 are 75.1 years for men and 80.8 years for women, while at age 65 they are 16.1 and 19.7 years, respectively. Total net immigration is ultimately assumed to be 1,150,000 persons per year. The assumed level of net annual immigration is the combination of 750,000 net legal immigrants per year and 400,000 net other-than-legal immigrants per year.

For alternative III, the total fertility rate is assumed to decrease to an ultimate level of 1.6 by 2019. The age-sex-adjusted death rate is assumed to decrease more rapidly than for alternative II, with the total reduction from the 1994 level being 54 percent by 2069. Life expectancies at birth in 2070 are 81.2 years for men and 87.7 years for women, while at age 65 they are 21.4 and 25.3 years, respectively. Total net immigration is ultimately assumed to be 750,000 persons

per year, the combination of 600,000 net legal immigrants per year and 150,000 net other-than-legal immigrants per year.

TABLE II.D2.—SELECTED DEMOGRAPHIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1940-2070

Calendar year	Total fertility rate[1]	Age-sex-adjusted death rate[2] (per 100,000)	Life expectancy[3] At birth Male	At birth Female	At age 65 Male	At age 65 Female
Historical data:						
1940	2.23	1,532.8	61.4	65.7	11.9	13.4
1945	2.42	1,366.4	62.9	68.4	12.6	14.4
1950	3.03	1,225.3	65.6	71.1	12.8	15.1
1955	3.50	1,134.2	66.7	72.8	13.1	15.6
1960	3.61	1,128.6	66.7	73.2	12.9	15.9
1965	2.88	1,103.6	66.8	73.8	12.9	16.3
1970	2.43	1,041.8	67.1	74.9	13.1	17.1
1975	1.77	934.0	68.7	76.6	13.7	18.0
1976	1.74	923.2	69.1	76.8	13.7	18.1
1977	1.79	898.0	69.4	77.2	13.9	18.3
1978	1.76	892.4	69.6	77.2	13.9	18.3
1979	1.82	864.2	70.0	77.7	14.2	18.6
1980	1.85	878.1	69.9	77.5	14.0	18.4
1981	1.83	853.8	70.4	77.8	14.2	18.6
1982	1.83	828.5	70.8	78.2	14.5	18.8
1983	1.81	836.1	70.9	78.1	14.3	18.6
1984	1.80	829.6	71.1	78.2	14.4	18.7
1985	1.84	831.8	71.1	78.2	14.4	18.6
1986	1.84	824.8	71.1	78.3	14.5	18.7
1987	1.87	816.1	71.3	78.4	14.6	18.7
1988	1.93	824.5	71.2	78.3	14.6	18.7
1989	2.01	804.1	71.5	78.6	14.8	18.9
1990	2.07	789.0	71.8	78.8	15.0	19.0
1991	2.07	778.8	71.9	78.9	15.1	19.1
1992[4]	2.06	785.8	72.0	78.9	15.0	18.9
1993[4]	2.06	785.7	72.0	78.9	15.1	18.9
1994[4]	2.06	776.3	72.6	79.0	15.2	19.0
Intermediate:						
1995	2.05	769.7	72.2	79.1	15.3	19.1
2000	2.02	738.3	72.9	79.7	15.5	19.3
2005	1.99	707.5	73.7	80.1	15.8	19.5
2010	1.96	684.7	74.3	80.5	16.0	19.6
2015	1.92	665.5	74.6	80.8	16.2	19.8
2020	1.90	647.4	74.9	81.1	16.4	20.1
2025	1.90	630.2	75.2	81.4	16.6	20.3
2030	1.90	613.8	75.5	81.7	16.8	20.5
2035	1.90	598.1	75.8	82.0	17.0	20.7
2040	1.90	583.1	76.1	82.2	17.2	20.9
2045	1.90	568.9	76.4	82.5	17.4	21.2
2050	1.90	555.2	76.7	82.8	17.6	21.4
2055	1.90	542.2	77.0	83.1	17.8	21.6
2060	1.90	529.7	77.2	83.3	18.0	21.8
2065	1.90	517.8	77.5	83.6	18.1	22.0
2070	1.90	506.3	77.7	83.8	18.3	22.2
Low Cost:						
1995	2.06	768.0	72.6	79.0	15.2	19.0
2000	2.10	759.9	72.9	79.2	15.2	18.9
2005	2.13	754.9	73.2	79.2	15.2	18.7
2010	2.15	748.1	73.4	79.3	15.2	18.7
2015	2.18	739.1	73.6	79.4	15.3	18.8
2020	2.20	730.1	73.7	79.6	15.4	18.9
2025	2.20	721.4	73.9	79.7	15.5	18.9
2030	2.20	712.9	74.1	79.9	15.5	19.0
2035	2.20	704.7	74.2	80.0	15.6	19.1
2040	2.20	696.8	74.3	80.1	15.7	19.2
2045	2.20	689.1	74.5	80.3	15.8	19.3
2050	2.20	681.6	74.6	80.4	15.8	19.3

TABLE II.D2.—SELECTED DEMOGRAPHIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1940-2070 (Cont.)

Calendar year	Total fertility rate[1]	Age-sex-adjusted death rate[2] (per 100,000)	Life expectancy[3] At birth Male	Life expectancy[3] At birth Female	Life expectancy[3] At age 65 Male	Life expectancy[3] At age 65 Female
Low Cost (Cont.):						
2055	2.20	674.3	74.7	80.5	15.9	19.4
2060	2.20	667.2	74.9	80.6	16.0	19.5
2065	2.20	660.3	75.0	80.7	16.0	19.6
2070	2.20	653.7	75.1	80.8	16.1	19.7
High Cost:						
1995	2.04	766.0	72.0	79.3	15.4	19.2
2000	1.95	726.7	72.4	80.0	15.8	19.8
2005	1.86	676.2	73.6	80.8	16.3	20.2
2010	1.76	626.1	75.0	81.6	16.7	20.5
2015	1.67	590.9	75.8	82.2	17.1	20.9
2020	1.60	562.5	76.4	82.7	17.5	21.3
2025	1.60	537.1	76.8	83.2	17.9	21.8
2030	1.60	513.2	77.3	83.8	18.3	22.2
2035	1.60	490.6	77.8	84.3	18.6	22.6
2040	1.60	469.1	78.3	84.8	19.0	23.0
2045	1.60	448.6	78.7	85.3	19.4	23.4
2050	1.60	429.1	79.2	85.8	19.8	23.8
2055	1.60	410.7	79.7	86.3	20.2	24.2
2060	1.60	393.3	80.2	86.8	20.6	24.6
2065	1.60	376.7	80.7	87.3	21.0	25.0
2070	1.60	361.1	81.2	87.7	21.4	25.3

[1]The total fertility rate for any year is the average number of children who would be born to a woman in her lifetime if she were to experience the birth rates by age observed in, or assumed for, the selected year, and if she were to survive the entire child-bearing period. The ultimate total fertility rate is assumed to be reached in 2019.

[2]The age-sex-adjusted death rate is the crude rate that would occur in the enumerated total population as of April 1, 1980, if that population were to experience the death rates by age and sex observed in, or assumed for, the selected year.

[3]The life expectancy for any year is the average number of years of life remaining for a person if that person were to experience the death rates by age observed in, or assumed for, the selected year.

[4]Preliminary or estimated.

In addition to the assumptions discussed above, many other factors are necessary to prepare the estimates presented in this report. Section II.H includes a discussion of many of those factors.

The ultimate values presented in tables II.D1 and II.D2 reflect little change from the ultimate values used for the 1994 Annual Report. Different levels, as opposed to rates of change, in several factors reflect, primarily, different starting levels based on additional data collected since the last report. The increase in the annual net immigration is due to an increase of 50,000 in the annual net number of other-than-legal immigrants entering the Social Security area population each year. This increase is consistent with estimates based on recent data from the Immigration and Naturalization Service. The effect on the financing of the OASDI program of this and other changes is discussed in section II.F2.

E. AUTOMATIC ADJUSTMENTS

The Social Security Act specifies that certain program amounts affecting the determination of OASDI benefits are to be adjusted annually, in general, to reflect changes in the economy. The law prescribes specific formulas that, when applied to reported statistics, produce "automatic" revisions in these program amounts and hence in the benefit-computation procedures.

In this section, values are shown for the program amounts that are subject to automatic adjustment, from the time that such adjustments became effective through 2004. Projected values for future years are based on the economic assumptions described in the preceding section of this report. Appendix F, in addition to providing the most recent determinations of program amounts under the automatic adjustment provisions, also provides a more complete description of such amounts.

Under the automatic-adjustment provisions affecting cost-of-living increases, benefits generally are increased once a year. These provisions were originally enacted in 1972 and first became effective with the benefit increase effective for June 1975. The 1983 amendments changed the effective month to December for years after 1982. For persons becoming eligible for benefits in 1979 and later, the increases generally begin with the year in which the worker reaches age 62, or becomes disabled or dies, if earlier. An automatic cost-of-living benefit increase of 2.8 percent, effective for December 1994, was announced in October 1994, as described in Appendix F. The automatic cost-of-living benefit increase for any year is normally based on the change in the CPI from the third quarter of the previous year to the third quarter of the current year.[1]

Under section 215(b)(3) of the Social Security Act, the national average wage index[2] for each year after 1950 is used to index the earnings of most workers first becoming eligible for benefits in 1979 or later. This procedure converts a worker's past earnings to approximately their equivalent values near the time of the worker's retirement or other eligibility, and these indexed values are used to calculate the worker's benefit. The average wage index is also used

[1] If the combined assets of the OASI and DI Trust Funds at the beginning of a year represent less than 20 percent of annual expenditures for that year, then the automatic benefit increase for December is limited to the lesser of the increases in wages or prices. This "stabilizer" provision has not affected any benefit increases since its enactment in 1983. Based on the projected operations of the trust funds shown in this report under the alternative sets of assumptions, the stabilizer provision is unlikely to affect any future OASDI benefit increases under present law.

[2] A provision of Public Law 103-296 provided the term "national average wage index" to refer to the average of the total wages. The average wage index is defined in the Code of Federal Regulations (Title 20, Chapter III, section 404.211(c)).

to adjust most of the program amounts that are subject to the automatic-adjustment provisions. Table II.E1 shows the average wage index as determined for each year 1951 through 1993.

TABLE II.E1.—AVERAGE WAGE INDEX, CALENDAR YEARS 1951-93

Year	Amount	Year	Amount	Year	Amount
1951	$2,799.16	1966	$4,938.36	1981	$13,773.10
1952	2,973.32	1967	5,213.44	1982	14,531.34
1953	3,139.44	1968	5,571.76	1983	15,239.24
1954	3,155.64	1969	5,893.76	1984	16,135.07
1955	3,301.44	1970	6,186.24	1985	16,822.51
1956	3,532.36	1971	6,497.08	1986	17,321.82
1957	3,641.72	1972	7,133.80	1987	18,426.51
1958	3,673.80	1973	7,580.16	1988	19,334.04
1959	3,855.80	1974	8,030.76	1989	20,099.55
1960	4,007.12	1975	8,630.92	1990	21,027.98
1961	4,086.76	1976	9,226.48	1991	21,811.60
1962	4,291.40	1977	9,779.44	1992	22,935.42
1963	4,396.64	1978	10,556.03	1993	23,132.67
1964	4,576.32	1979	11,479.46		
1965	4,658.72	1980	12,513.46		

The law provides for an automatic increase in the OASDI program's contribution and benefit base, based on the increase in the average wage index, for the year following a year in which an automatic benefit increase became effective. As described in Appendix F, the contribution and benefit base for 1995 was determined to be $61,200.

Under the retirement earnings test, earnings below certain amounts are exempted from the withholding of benefits payable to beneficiaries under age 70. Different exempt amounts apply for beneficiaries under age 65 and for those aged 65 to 69. The automatic adjustment provisions require that such exempt amounts be increased in the year following a year in which an automatic cost-of-living benefit increase becomes effective. Increases in the exempt amounts are based on increases in the average wage index.

The method used to increase the contribution and benefit base (and the "old-law" base as described later in this section) and the retirement test exempt amounts was modified by a provision of Public Law 103-296. Under this modified procedure, these amounts are indexed from a specified base year (1994) rather than the year-to-year indexing method used previously. This change makes the indexing procedures used for the contribution and benefit base and the retirement test exempt amounts consistent with the methods used for all other wage-indexed program amounts and eliminates possible

cumulative rounding distortion. For further details concerning this modified procedure, refer to Appendix F.

Table II.E2 shows historical automatic cost-of-living benefit increases for the years 1975-94 and assumed increases through 2004. The table also shows historical year-to-year percentage increases in the average wage index for 1975-93 and assumed increases through 2004. As noted above, the OASDI contribution and benefit base and the retirement test exempt amounts are adjusted on the basis of such wage increases. The historical and projected amounts for this base and the exempt amounts are also shown in table II.E2. The projections are shown under the three alternative sets of economic assumptions described in the previous section.

TABLE II.E2.—COST-OF-LIVING BENEFIT INCREASES, AVERAGE WAGE INDEX INCREASES, OASDI CONTRIBUTION AND BENEFIT BASES, AND RETIREMENT EARNINGS TEST EXEMPT AMOUNTS, 1975-2004

Calendar year	OASDI benefit increases [1] (percent)	Increase in average wage index [2] (percent)	OASDI contribution and benefit base [3]	Retirement earnings test exempt amount: Under age 65	Retirement earnings test exempt amount: Ages 65 and over [4]
Historical data:					
1975	8.0	7.5	$14,100	$2,520	$2,520
1976	6.4	6.9	15,300	2,760	2,760
1977	5.9	6.0	16,500	3,000	3,000
1978	6.5	7.9	17,700	3,240	[5] 4,000
1979	9.9	8.7	[5] 22,900	3,480	[5] 4,500
1980	14.3	9.0	[5] 25,900	3,720	[5] 5,000
1981	11.2	10.1	[5] 29,700	4,080	[5] 5,500
1982	7.4	5.5	32,400	4,440	[5] 6,000
1983	3.5	4.9	35,700	4,920	6,600
1984	3.5	5.9	37,800	5,160	6,960
1985	3.1	4.3	39,600	5,400	7,320
1986	1.3	3.0	42,000	5,760	7,800
1987	4.2	6.4	43,800	6,000	8,160
1988	4.0	4.9	45,000	6,120	8,400
1989	4.7	4.0	48,000	6,480	8,880
1990	5.4	4.6	51,300	6,840	9,360
1991	3.7	3.7	53,400	7,080	9,720
1992	3.0	5.2	55,500	7,440	10,200
1993	2.6	.9	57,600	7,680	10,560
1994	2.8	[6] 3.3	60,600	8,040	11,160
Intermediate:					
1995	3.0	3.9	[7] 61,200	[7] 8,160	[7] 11,280
1996	3.2	4.0	63,000	8,400	11,640
1997	3.3	4.2	65,700	8,760	12,120
1998	3.4	4.0	68,100	9,000	12,600
1999	3.6	4.1	71,100	9,480	13,080
2000	3.7	4.4	73,800	9,840	13,560
2001	3.9	4.6	76,800	10,200	14,160
2002	4.0	4.7	80,400	10,680	14,760
2003	4.0	4.8	84,000	11,160	15,480
2004	4.0	4.9	87,900	11,640	16,200

TABLE II.E2.—COST-OF-LIVING BENEFIT INCREASES, AVERAGE WAGE INDEX INCREASES, OASDI CONTRIBUTION AND BENEFIT BASES, AND RETIREMENT EARNINGS TEST EXEMPT AMOUNTS, 1975-2004 (Cont.)

Calendar year	OASDI benefit increases [1] (percent)	Increase in average wage index [2] (percent)	OASDI contribution and benefit base [3]	Retirement earnings test exempt amount: Under age 65	Retirement earnings test exempt amount: Ages 65 and over [4]
Low Cost:					
1995	2.5	4.1	[7] $61,200	[7] $8,160	[7] $11,280
1996	2.9	4.1	63,300	8,400	11,640
1997	3.0	4.5	65,700	8,760	12,120
1998	3.0	4.3	68,400	9,120	12,600
1999	3.1	4.4	71,400	9,480	13,200
2000	3.0	4.5	74,700	9,960	13,800
2001	3.0	4.4	78,000	10,320	14,400
2002	3.0	4.3	81,300	10,800	15,000
2003	3.0	4.4	84,900	11,280	15,600
2004	3.0	4.5	88,800	11,760	16,320
High Cost:					
1995	3.8	3.7	[7] 61,200	[7] 8,160	[7] 11,280
1996	3.8	3.4	62,700	8,280	11,520
1997	5.6	5.9	65,100	8,640	12,000
1998	6.5	5.9	67,500	9,000	12,360
1999	4.7	3.8	71,400	9,480	13,080
2000	5.0	5.4	75,600	10,080	13,920
2001	5.0	5.1	78,300	10,440	14,400
2002	5.0	5.0	82,800	10,920	15,240
2003	5.0	5.3	87,000	11,520	15,960
2004	5.0	5.5	91,200	12,120	16,800

[1] Effective with benefits payable for June in each year 1975-82, and for December in each year after 1982.

[2] Increase in the average wage index from prior year to the year shown. See footnote 6 below and table III.B1 for projected dollar amounts of the average wage index.

[3] The bases for years after 1989 were increased slightly by changes to the indexing procedure, as required by Public Law 101-239. Prior to 1991, the Hospital Insurance (HI) contribution base was the same as the OASDI contribution and benefit base. Higher HI bases of $125,000, $130,200, and $135,000 applied for 1991-93, respectively. Public Law 103-66 repealed the HI contribution base.

[4] In 1955-82, the retirement earnings test did not apply at ages 72 and over; beginning in 1983, it does not apply at ages 70 and over.

[5] Amount specified by the Social Security Amendments of 1977.

[6] Based on an estimated average wage index of $23,899.66 for 1994.

[7] Actual amount, as determined and announced in October 1994.

Other wage-indexed amounts are shown in table II.E3. The table provides historical values from 1978, when the amount of earnings required for a quarter of coverage was first indexed, through 1995, and also shows projected amounts under the intermediate assumptions through the year 2004. These other wage-indexed program amounts are described in the following paragraphs.

As noted earlier, a worker who becomes eligible for benefits in 1979 or later generally receives a benefit based on his or her indexed earnings. These indexed earnings are used to calculate the worker's Average Indexed Monthly Earnings (AIME). The basic formula used

to compute the Primary Insurance Amount (PIA) for workers who reach age 62, become disabled, or die in 1995 is:

90 percent of the first $426 of AIME, plus
32 percent of AIME in excess of $426
but not in excess of $2,567, plus
15 percent of AIME in excess of $2,567.

The amounts separating the individual's AIME into intervals—the "bend points"—are adjusted automatically by the changes in average wages as specified in section 215(a)(1)(B) of the Social Security Act.

A similar formula is used to compute the maximum total amount of monthly benefits payable on the basis of the earnings of a retired or deceased individual. This formula is a function of the individual's PIA, and is shown below for workers who first became eligible for benefits, or who died before becoming eligible, in 1995:

150 percent of the first $544 of PIA, plus
272 percent of the PIA in excess of $544
but not in excess of $785, plus
134 percent of the PIA in excess of $785
but not in excess of $1,024, plus
175 percent of the PIA in excess of $1,024.

These PIA-interval bend points are adjusted automatically in accordance with section 203(a)(2) of the Act.

An individual's insured status depends on the number of quarters of coverage he or she has earned while in covered employment. The 1977 amendments specified the amount of earnings required in 1978 to be credited with a quarter of coverage and provided for automatic adjustment of this amount for years thereafter.

The law provides for the determination of the OASDI contribution and benefit bases that would have been in effect in each year after 1978 under the automatic-adjustment provisions as in effect before the enactment of the 1977 amendments. This "old-law base" is used in determining special-minimum benefits for certain workers who have many years of low earnings in covered employment.[1] Beginning in 1986, the old-law base is also used in the calculation of OASDI benefits for certain workers who are eligible to receive pensions based on noncovered employment. In addition, it is used for certain purposes under the Railroad Retirement program and the Employee Retirement Income Security Act of 1974.

[1] For special minimum purposes, "low earnings" means earnings of at least 15 percent of the old-law base. Prior to 1991, the definition required earnings of at least 25 percent of the old-law base.

TABLE II.E3.—SELECTED OASDI PROGRAM AMOUNTS DETERMINED UNDER THE AUTOMATIC-ADJUSTMENT PROVISIONS, CALENDAR YEARS 1978-95, AND PROJECTED FUTURE AMOUNTS, CALENDAR YEARS 1996-2004, ON THE BASIS OF THE INTERMEDIATE SET OF ASSUMPTIONS

Calendar year	AIME "bend points" in PIA formula		PIA "bend points" in maximum-family-benefit formula			Earnings required for a quarter of coverage[1]	"Old law" contribution and benefit base[2]
	First	Second	First	Second	Third		
Historical data:							
1978	(3)	(3)	(3)	(3)	(3)	[4] $250	(3)
1979	[4] $180	[4] $1,085	[4] $230	[4] $332	[4] $433	260	$18,900
1980	194	1,171	248	358	467	290	20,400
1981	211	1,274	270	390	508	310	22,200
1982	230	1,388	294	425	554	340	24,300
1983	254	1,528	324	468	610	370	26,700
1984	267	1,612	342	493	643	390	28,200
1985	280	1,691	358	517	675	410	29,700
1986	297	1,790	379	548	714	440	31,500
1987	310	1,866	396	571	745	460	32,700
1988	319	1,922	407	588	767	470	33,600
1989	339	2,044	433	626	816	500	35,700
1990	356	2,145	455	656	856	520	38,100
1991	370	2,230	473	682	890	540	39,600
1992	387	2,333	495	714	931	570	41,400
1993	401	2,420	513	740	966	590	42,900
1994	422	2,545	539	779	1,016	620	45,000
1995	426	2,567	544	785	1,024	630	45,300
Estimates:							
1996	440	2,652	562	811	1,058	650	46,800
1997	457	2,754	584	843	1,099	670	48,600
1998	475	2,864	607	876	1,143	700	50,700
1999	495	2,984	633	913	1,191	730	52,800
2000	515	3,104	658	950	1,239	760	54,900
2001	536	3,230	685	988	1,289	790	57,000
2002	559	3,371	715	1,032	1,345	820	59,700
2003	585	3,525	747	1,079	1,407	860	62,400
2004	612	3,691	782	1,129	1,473	900	65,400

[1]See Appendix F for a description of quarter-of-coverage requirements prior to 1978.

[2]Contribution and benefit base that would have been determined automatically under the law in effect prior to enactment of the Social Security Amendments of 1977. The bases for years after 1989 were increased slightly by changes to the indexing procedure to determine the base, as required by Public Law 101-239.

[3]No provision in law for this amount in this year.

[4]Amount specified for first year by Social Security Amendments of 1977; amounts for subsequent years subject to automatic-adjustment provisions.

F. ACTUARIAL ESTIMATES

Section 201(c)(2) of the Social Security Act requires the Board of Trustees to report annually to the Congress on the operations and status of the OASI and DI Trust Funds during the preceding fiscal year and on the expected operations and status of those trust funds during the ensuing 5 fiscal years. Section 201(c) of the Act also requires that the annual report include "a statement of the actuarial status of the Trust Funds."

The required information for the fiscal year that ended September 30, 1994, is presented in section II.C of this report. Estimates of the operations and status of the trust funds during fiscal years 1995-2004 are presented in this section. In addition, similar estimates for calendar years 1995-2004 are presented. A description of the actuarial status of the trust funds over the next 75 years, including long-range estimates of program income and program costs over that period, is also included in this section. The methods used to estimate the short-range operations of the trust funds and the long-range actuarial status are described in section II.H.

A number of different measures are useful in evaluating the financial status of the trust funds over the next 75 years. In addition to actuarial balance, and summarized income and cost rates, which are described in detail below, these measures include (1) the levels of future annual income and outgo, both in terms of dollars and relative to annual taxable earnings or payroll, including the pattern and ultimate values of such levels; (2) the annual differences between income and outgo, i.e., the annual balances, in dollars and relative to taxable payroll; (3) the size of future fund accumulations, in dollars and relative to future annual expenditures; and (4) the year in which trust fund exhaustion is estimated to occur. Estimates of all these indicators are presented in this section or in the appendices of this report. However, more attention is focused on certain elements of these measures, as described below.

In the short range, the adequacy of the trust fund level is generally measured by the "trust fund ratio," which is defined to be the assets at the beginning of the year expressed as a percentage of the outgo during the year. (For the years 1984-90, the assets at the beginning of the year also included advance tax transfers for the month of January. Assets at the beginning of subsequent years include ad-

vance tax transfers only if such transfers are needed to enable the timely payment of benefits.) The trust fund ratio represents the proportion of a year's outgo which can be paid with the funds available at the beginning of the year. During periods when trust fund disbursements exceed income, as might happen during an economic recession, trust fund assets are used to meet the shortfall. In the event of recurring shortfalls for an extended period, the trust funds can allow sufficient time for the development, enactment, and implementation of legislation to restore financial stability to the program.

The test of financial adequacy over the short-range projection period (the next 10 years), is applicable to each of the OASI and DI Trust Funds, separately, as well as to the combined funds. The requirements of this test are as follows: If the estimated trust fund ratio for a fund is at least 100 percent at the beginning of the projection period, then it must be projected to remain at or above 100 percent throughout the 10-year projection period. Alternatively, if the ratio is initially less than 100 percent, then it must be projected to reach a level of at least 100 percent by the beginning of the sixth year and to remain at or above 100 percent throughout the remainder of the 10-year period. In addition, the fund's estimated assets at the beginning of each month of the 10-year period must be sufficient to cover that month's disbursements. This test is applied on the basis of the intermediate (alternative II) estimates. Failure to meet this test by either trust fund is an indication that solvency of the program over the next 10 years is in question and that Congressional action is needed to improve the short-range financial adequacy of the program.

Basic to the discussion of the long-range actuarial status are the concepts of "income rate" and "cost rate," each of which is expressed as a percentage of taxable payroll. The annual income rate is the ratio of income from revenues (payroll tax contributions and income from the taxation of benefits) to the OASDI taxable payroll for the year. The OASDI taxable payroll consists of the total earnings which are subject to OASDI taxes, with some relatively small adjustments.[1] Because the taxable payroll reflects these adjustments, the annual income rate can be defined to be the sum of the OASDI combined employee-employer contribution rate (or the payroll-tax rate) scheduled in the law and the rate of income from taxation of benefits

[1] Adjustments are made to include, after 1982, deemed wage credits based on military service, and to reflect the lower effective tax rates (as compared to the combined employee-employer rate) which apply to multiple-employer "excess wages," and which did apply, before 1984, to net earnings from self-employment and, before 1988, to income from tips.

(which is, in turn, expressed as a percentage of taxable payroll). As such, it excludes reimbursements from the general fund of the Treasury for the costs associated with special monthly payments to certain uninsured persons who attained age 72 before 1968 and who have fewer than 3 quarters of coverage, transfers under the interfund borrowing provisions, and net investment income.

The annual cost rate is the ratio of the cost (or outgo, expenditures, or disbursements) of the program to the taxable payroll for the year. In this context, the outgo is defined to include benefit payments, special monthly payments to certain uninsured persons who have 3 or more quarters of coverage (and whose payments are therefore not reimbursable from the general fund of the Treasury), administrative expenses, net transfers from the trust funds to the Railroad Retirement program under the financial-interchange provisions, and payments for vocational rehabilitation services for disabled beneficiaries; it excludes special monthly payments to certain uninsured persons whose payments are reimbursable from the general fund of the Treasury (as described above), and transfers under the interfund borrowing provisions. For any year, the income rate minus the cost rate is referred to as the "balance" for the year. (In this context, the term "balance" does not represent the assets of the trust funds, which are sometimes referred to as the "balance" in the trust funds.)

The long-range actuarial status of the trust funds has generally been summarized by the calculation of the "actuarial balance." The actuarial balance for a specified valuation period is defined as the difference between the summarized income rate and the summarized cost rate over that period. The summarized income rate over a period of years is equal to the ratio of (a) the sum of the trust fund balance at the beginning of the period plus the present value of the total income (excluding interest earnings) during the period, to (b) the present value of the taxable payroll for the years in the period. The summarized cost rate is equal to the ratio of (a) the sum of the present value of the outgo during the period plus the present value of a targeted trust fund level at the end of the period equal to the following year's outgo to (b) the present value of the taxable payroll for the years in the period. A targeted ending trust fund level of 1 year's expenditures is considered to be an adequate reserve for unforeseen contingencies; thus, in addition to the total outgo during the projection period, the summarized cost rate includes the cost of

reaching and maintaining a target trust fund ratio of 100 percent through the end of the projection period.

The present-value calculations take account of the effect of interest on future income and outgo. In calculating the present value of future income, for example, the income in each year of the projection period is discounted to the beginning of the period using the interest rate assumed for calculating the interest earnings of the trust funds during the period. Thus, the calculations of the summarized income and cost rates are consistent with the estimates of trust fund operations over the projection period.

If the program is in exact actuarial balance for a particular period (that is, if the actuarial balance is zero), then the present value of estimated future income for all years in the period, plus the beginning trust fund balance, is exactly equal to the present value of estimated future expenditures for all years in the period, plus the present value of targeted trust fund assets at the end of the period in the amount of the next year's estimated outgo. A negative actuarial balance indicates that future estimated income and the beginning trust fund balance together are not sufficient to accumulate to the level of the targeted assets while also covering all estimated expenditures in the period. A positive actuarial balance indicates that in addition to covering all estimated expenditures in the period, the estimated ending trust fund assets are more than the targeted level.

The size of the actuarial balance represents a measure of the program's financial adequacy for the period in question. The actuarial balance can be interpreted as that amount which, if added to the combined employee-employer contribution rate scheduled under present law for each of the next 75 years, would bring the program into exact actuarial balance. Of course, there are any number of different ways to increase taxes or to reduce expenditures, as well as different combinations of such changes, that would have an equivalent effect on the actuarial balance. Any one of these different sets of changes would, therefore, bring the program into exact actuarial balance.

The long-range test of close actuarial balance applies to a set of valuation periods beginning with the first 10 years and continuing through the first 11 years, the first 12 years, etc., up to and including the full 75-year projection period. Under the long-range test, sum-

marized income rates and cost rates are calculated for each of the 66 valuation periods in the full 75-year long-range projection period, with the first of these periods consisting of the next 10 years. Each succeeding period becomes longer by 1 year, culminating with the period consisting of the next 75 years. The long-range test is met if, for each of the 66 time periods, the actuarial balance is not less than zero or is negative by, at most, a specified percentage of the summarized cost rate for the same time period. The percentage allowed for a negative actuarial balance is 5 percent for the full 75-year period. For shorter periods, the allowable percentage begins with zero for the first 10 years and increases uniformly for longer periods, until it reaches the maximum percentage of 5 percent allowed for the 75-year period. The criterion for meeting the test is less stringent for the longer periods in recognition of the greater uncertainty associated with estimates for more distant years.

When a negative actuarial balance in excess of the allowable percentage of the summarized cost rate is projected for one or more of the 66 separate valuation periods, the program fails the long-range test of close actuarial balance. Being out of close actuarial balance indicates that the program is expected to experience financial problems in the future and that ways of improving the financial status of the program should be considered. The sooner the actuarial balance is less than the minimum allowable balance, expressed as a percentage of the summarized cost rate, the more urgent is the need for corrective action. However, it is recognized that necessary changes in program financing or benefit provisions should not be put off until the last possible moment if future beneficiaries and workers are to be able to effectively plan for their retirement.

It was noted earlier in this section that in addition to the measures used in the tests of the overall financial condition of the program, other financial measures are also presented in this report. All of these measures are important factors in arriving at a full understanding of the financial position of the OASDI program.

1. Operations and Status of the Trust Funds During the Period October 1, 1994, to December 31, 2004

This subsection presents estimates of the operations and financial status of the OASI and DI Trust Funds for the period October 1, 1994, to December 31, 2004, based on the assumptions described in the preceding two sections. No changes are assumed to occur in the present statutory provisions and regulations under which the OASDI program operates.[1]

These estimates indicate that the assets of the OASI Trust Fund would continue to increase throughout the next 10 years, rapidly under the intermediate and low cost assumptions and moderately under the high cost assumptions. The estimates indicate that the assets of the DI Trust Fund would also continue to increase throughout the next 10 years under the intermediate and low cost assumptions, at a slightly lower rate than for the OASI Trust Fund. Under the high cost assumptions, DI assets would increase for a few years before declining and becoming insufficient to permit the timely payment of benefits by the middle of 2004.

As will be shown later in this subsection, the OASI and DI Trust Funds, both individually and combined, meet the requirements of the Trustees' test of short-range financial adequacy.

[1] The estimates shown in this subsection reflect 12 months of benefit payments in each year of the short-range projection period. In practice, 13 benefit payments can be made in certain years, with the next year having only 11 payments. This situation can result from the statutory requirement that benefit checks be delivered early when the normal check delivery date is a Saturday, Sunday, or legal public holiday. For example, the benefit checks for December 1992 would normally have been delivered on January 3, 1993; however, because that day was a Sunday, and the two preceding days a Saturday and a holiday, the checks were actually delivered on December 31, 1992. The annual benefit figures are shown as if those benefit checks were delivered on the usual date.

Actuarial Analysis

a. OASI Trust Fund Operations

Estimates of the operations and status of the OASI Trust Fund during calendar years 1995-2004 are shown in table II.F1 based on each of the three alternative sets of assumptions. Actual operations for calendar year 1994 are also shown in the table.

The increases in estimated income shown in table II.F1 under each set of assumptions reflect increases in estimated taxable earnings and growth in interest earnings on the invested assets of the trust fund. For each alternative, employment and earnings are assumed to increase in every year through the year 2004 (with the exception that employment is estimated to decline temporarily during the economic recessions assumed under alternative III). The number of persons with taxable earnings would increase on the basis of alternatives I, II, and III from 139 million during calendar year 1994 to about 157 million, 152 million, and 148 million, respectively, in 2004. The total annual amount of taxable earnings is projected to increase from $2,818 billion in 1994 to $4,896 billion, $4,664 billion, and $4,711 billion, in 2004, on the basis of alternatives I, II, and III, respectively. (In 1994 dollars—taking account of assumed increases in the CPI from 1994 to 2004 under each alternative—the estimated amounts of taxable earnings in 2004 are $3,661 billion, $3,272 billion, and $2,910 billion, respectively.) These increases in taxable earnings are due primarily to (1) projected increases in employment levels and average earnings in covered employment, (2) increases in the contribution and benefit base in 1995-2004 under the automatic adjustment provisions, and (3) various provisions enacted in 1983 and later, including extensions of coverage to additional categories of workers.

Growth in interest earnings represents a significant component of the overall increase in trust fund income during this period. Although interest rates payable on trust fund investments are not assumed to change substantially from current levels, the continuing rapid increase in OASI assets will result in a corresponding increase in interest income. By the year 2004, interest income to the OASI Trust Fund is projected to range from 12 to 16 percent of total trust fund income (depending on alternative), as compared to 9 percent in 1994.

TABLE II.F1.—ESTIMATED OPERATIONS OF THE OASI TRUST FUND BY ALTERNATIVE, CALENDAR YEARS 1994-2004

[Amounts in billions]

Calendar year	Income	Expenditures	Net increase in fund	Fund at end of year	Trust fund Amount[1]	Trust fund Ratio[2]
1994[3]	$328.3	$284.1	$44.1	$413.5	$369.3	130
Intermediate:						
1995	347.4	297.3	50.1	463.5	413.5	139
1996	370.4	311.2	59.2	522.8	463.5	149
1997	396.8	325.9	70.9	593.7	522.8	160
1998	419.4	341.6	77.8	671.5	593.7	174
1999	442.4	358.6	83.9	755.3	671.5	187
2000	464.4	377.2	87.2	842.6	755.3	200
2001	491.9	397.2	94.7	937.3	842.6	212
2002	521.6	419.0	102.6	1,039.9	937.3	224
2003	553.6	442.3	111.3	1,151.2	1,039.9	235
2004	587.6	467.1	120.5	1,271.7	1,151.2	246
Low Cost:						
1995	349.7	296.9	52.8	466.2	413.5	139
1996	376.7	308.9	67.8	534.1	466.2	151
1997	407.3	322.1	85.2	619.3	534.1	166
1998	435.1	336.2	99.0	718.3	619.3	184
1999	463.9	351.0	112.9	831.2	718.3	205
2000	491.4	367.0	124.4	955.6	831.2	226
2001	523.2	383.4	139.8	1,095.4	955.6	249
2002	556.0	400.7	155.4	1,250.7	1,095.4	273
2003	591.4	418.8	172.6	1,423.3	1,250.7	299
2004	629.0	438.0	191.0	1,614.4	1,423.3	325
High Cost:						
1995	346.5	297.8	48.6	462.1	413.5	139
1996	363.2	314.4	48.8	510.9	462.1	147
1997	390.0	331.7	58.3	569.2	510.9	154
1998	419.6	355.7	63.8	633.0	569.2	160
1999	438.4	384.7	53.7	686.6	633.0	165
2000	459.4	409.2	50.2	736.8	686.6	168
2001	489.3	436.3	53.1	789.9	736.8	169
2002	519.1	464.9	54.2	844.1	789.9	170
2003	549.4	495.1	54.3	898.4	844.1	170
2004	580.8	527.3	53.4	951.8	898.4	170

[1]Represents assets at beginning of year.

[2]Represents amounts shown in preceding column as a percentage of expenditures during the year. See text concerning interpretation of these ratios.

[3]Figures for 1994 represent actual experience.

Note: Totals do not necessarily equal the sums of rounded components.

Rising expenditures during 1995-2004 reflect automatic benefit increases as well as the upward trend in the numbers of beneficiaries and in the average monthly earnings underlying benefits payable by the program. The growth in the number of beneficiaries in the past and the expected growth in the future result both from the increase in the aged population and from the increase in the proportion of the population which is eligible for benefits. The latter increase is primarily due to various amendments enacted after 1950 which mod-

ified eligibility provisions and extended coverage to additional categories of employment.

Growth has also occurred, and will continue to occur, in the proportion of eligible persons who, in fact, receive benefits. This growth is due to several factors, among which are (1) the amendments enacted since 1950 which affect the conditions governing the receipt of benefits and (2) the increasing percentage of eligible persons who are aged 70 and over and who therefore may receive benefits regardless of earnings.

The estimates shown in table II.F1 indicate that income to the OASI Trust Fund would substantially exceed expenditures in every year of the short-range projection period, under each of the three sets of assumptions used in this report. The assets of the OASI Trust Fund at the beginning of 1994 were equal to 130 percent of the fund's expenditures in 1994. As described in the introduction to this section, this ratio is known as the "trust fund ratio;" it provides a useful measure of the relative level of trust fund assets. During 1994, income exceeded disbursements by $44.1 billion. As a result, the trust fund ratio increased to about 139 percent at the beginning of 1995.

Assets are estimated to increase substantially in each year of the short-range projection period, based on each of the three alternative sets of assumptions. The increase in the trust fund ratio from 139 percent at the beginning of 1995 to the range of 170-325 percent at the beginning of the year 2004 is due, in part, to the increases in the OASI tax rate that became effective in 1988 and 1990 (even though much of the increase was reallocated to the DI Trust Fund in 1994). Asset growth is also assisted by growth in taxable earnings that is projected to exceed the growth in benefit payments throughout the short-range projection period (except for certain years under alternative III).

As noted in section II.B, the portion of the OASI Trust Fund that is not needed to meet day-to-day expenditures is used to purchase investments, generally in special public-debt obligations of the U.S. Government. The cash used to make these purchases becomes part of the general fund of the Treasury and is used to meet various Federal outlays. Interest is paid to the trust fund on these securities and, when the securities mature or are redeemed prior to maturity, general fund revenues are used to repay the principal to the trust

fund. Thus, the investment operations of the trust fund result in various cash flows between the trust fund and the general fund of the Treasury.

Currently, the excess of tax income to the OASI Trust Fund over the fund's expenditures results in a substantial net cash flow from the trust fund to the general fund. Sometime after the turn of the century, as shown in the following subsection, this cash flow will reverse; as trust fund securities are redeemed to meet benefit payments and other expenditures, revenue from the general fund of the Treasury will be drawn upon to provide the necessary cash. The accumulation and subsequent redemption of substantial trust fund assets has important public policy and economic implications that extend well beyond the operation of the OASDI program itself. Discussion of these broader issues is not within the scope of this report.

Based on the intermediate (alternative II) assumptions, the assets of the OASI Trust Fund would continue to exceed 100 percent of annual expenditures by a steadily increasing amount through the end of the year 2004. Consequently, the OASI Trust Fund satisfies the test of short-range financial adequacy by a wide margin. The estimates in table II.F1 also indicate that the short-range test would be satisfied even under the high cost assumptions.

In interpreting the trust fund ratios in table II.F1, it should be noted that at the beginning of any month there must be sufficient assets on hand to meet the benefit payments that are payable at the beginning of that month. The specific minimum amount of assets required for this purpose depends on a number of factors and varies somewhat from month to month. Assets of roughly 8 to 9 percent of annual expenditures are normally sufficient for this purpose. If the assets of either the OASI or DI Trust Fund at the end of a month fall below the minimum amount needed to meet the benefits payable at the beginning of the next month, section 201(a) of the Social Security Act provides for an advance transfer to the trust fund of all the taxes that are expected to be received by the fund in the next month. Thus, the difference between (1) the sum of the estimated trust fund ratios shown in table II.F1 and the advance tax transfers for January expressed as a percentage of total expenditures in the

year and (2) the minimum required level of about 8-9 percent, represents the reserve available to handle adverse contingencies.

b. DI Trust Fund Operations

The estimated operations and financial status of the DI Trust Fund during calendar years 1995-2004 under the three sets of assumptions are shown in table II.F2, together with figures on actual experience in 1994. Income is generally projected to increase steadily under each alternative, reflecting most of the same factors described previously in connection with the OASI Trust Fund. Because of the low level of DI assets, interest income is not currently a significant component of overall income to the DI Trust Fund; however, it is projected to increase to 9 percent of total trust fund income in 2004 on the basis of the intermediate assumptions.

Expenditures are estimated to increase because of automatic benefit increases and projected increases in the amounts of average monthly earnings on which benefits are based. In addition, on the basis of all three sets of assumptions, the number of DI beneficiaries is projected to continue increasing throughout the short-range projection period. The projected growth in the number of DI beneficiaries is attributable to several factors, including (1) gradual increases in the number of persons estimated to be insured for disability benefits and (2) an assumption that the number of insured workers who apply for and are awarded disability benefits will continue to substantially exceed the number of disabled worker beneficiaries whose benefits terminate each year as a result of death, recovery, or attainment of normal retirement age.

The proportion of insured workers who apply for and are awarded disability benefits in a given year is referred to as the "disability incidence rate." This rate has fluctuated substantially in past years and the causes for the variation have not been precisely determined. Incidence rates increased during 1970-75, declined during 1976-82, increased again during 1983-85, and remained steady in 1986-89. During 1990-92 the incidence rate resumed increasing, with unusually rapid increases (on a relative basis) of 8, 12, and 17 percent in those 3 years. In 1993-94, the observed incidence rate declined slightly. There remains, however, a backlog of pending disability applications awaiting final adjudication that is relatively large com-

pared to historical levels. This suggests that the recent declines in the incidence rate merely represent a delay in awards from 1993-94 to later years, rather than a true decrease.

The rapid increases in disability benefit applications and awards during 1990-93 appear to be attributable, in part, to the rise in unemployment associated with the 1990-91 economic recession (although the evidence is not conclusive). Other explanatory factors may include changes to the conditions governing receipt of disability benefits, as introduced through recent legislation, regulations, and court decisions, and increased awareness of the DI program by the public.

These and other factors were discussed at some length in a report entitled "The Social Security Disability Insurance Program: An Analysis" prepared by the Department of Health and Human Services at the request of the Board of Trustees. Reference should be made to this report (issued December 1992) for further details on the possible factors contributing to the rapid increase in disability incidence rates in recent years.

Due to the substantial variation exhibited by incidence rates in the past and the difficulty in determining reliable explanatory factors for this variation, any projection of future incidence rates necessarily will be uncertain. The 1994 disability incidence rate (calculated on an age-sex-adjusted basis) was 5.2 awards per 1,000 insured workers. This figure was about 16 percent higher than the average incidence rate of 4.5 per thousand that was experienced during 1975 through 1994. Under the intermediate assumptions, incidence rates are assumed to increase by another 6 percent in 1995 and then to decline gradually for the remainder of the short-range projection period, returning to the level experienced in 1994. Under the low cost alternative, incidence rates decline by about 15 percent during 1995-2004, dipping slightly under the 1975-94 average at the end of the period. The high cost alternative assumes that incidence rates increase by another 26 percent over the next 7 years (nearing briefly the highest levels experienced during the 1970s) and then decline slightly over the remaining 3 years of the short-range period.

The proportion of DI beneficiaries whose benefits terminate in a given year has also fluctuated significantly in the past. Over the last 20 years, the rates of benefit termination due to death or conversion to retirement benefits (at attainment of normal retirement age) have

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declined very gradually. This trend is attributable, in part, to the lower average age of new beneficiaries. The termination rate due to recovery has been much more volatile. Currently, the proportion of disabled beneficiaries whose benefits cease because of their recovery from disability is very low in comparison to past levels.

In this report, termination rates due to attainment of normal retirement age are estimated to continue their downward trend through about 2000. This rate would drop in 2003 and remain at a depressed level for 5 more years as a result of the increase in the normal retirement age which begins in that year. Age-specific death rates for disabled beneficiaries are assumed to remain at about their current level; the aggregate termination rate due to death, however, would continue to decline as a result of estimated continuing declines in the average age of beneficiaries. Terminations due to recovery are assumed to increase somewhat from their current unusually low level. In addition, relatively small increases in terminations are projected over the next 3-4 years reflecting the recent restrictions placed on benefits payable to individuals disabled by drug addiction and alcoholism. The overall termination rate (reflecting all causes) is projected under all three alternatives to continue declining gradually during 1995-98 and level off during 1999-2002. The overall rate then declines in 2003 due largely to the increase in the normal retirement age cited above.

TABLE II.F2.—ESTIMATED OPERATIONS OF THE DI TRUST FUND BY ALTERNATIVE, CALENDAR YEARS 1994-2004

[Amounts in billions]

Calendar year	Income	Expenditures	Net increase in fund	Fund at end of year	Trust fund	
					Amount[1]	Ratio[2]
1994[3]	$52.8	$38.9	$14.0	$22.9	$9.0	23
Intermediate:						
1995	57.9	42.7	15.2	38.1	22.9	54
1996	62.2	46.4	15.8	54.0	38.1	82
1997	60.5	50.1	10.4	64.4	54.0	108
1998	63.5	54.0	9.5	73.9	64.4	119
1999	66.9	58.5	8.4	82.3	73.9	126
2000	74.2	63.2	11.0	93.3	82.3	130
2001	78.8	68.3	10.5	103.8	93.3	137
2002	83.4	73.8	9.6	113.4	103.8	141
2003	88.2	79.9	8.2	121.6	113.4	142
2004	93.1	86.7	6.4	128.0	121.6	140
Low Cost:						
1995	58.4	42.0	16.4	39.3	22.9	55
1996	63.4	44.7	18.7	58.0	39.3	88
1997	62.4	47.4	14.9	72.9	58.0	122
1998	66.4	50.3	16.1	89.1	72.9	145
1999	71.0	53.6	17.4	106.5	89.1	166

TABLE II.F2.—ESTIMATED OPERATIONS OF THE DI TRUST FUND BY ALTERNATIVE, CALENDAR YEARS 1994-2004 (Cont.)

[Amounts in billions]

Calendar year	Income	Expenditures	Net increase in fund	Fund at end of year	Trust fund Amount[1]	Trust fund Ratio[2]
Low Cost:(Cont.)						
2000	$79.8	$57.0	$22.8	$129.3	$106.5	187
2001	85.5	60.5	25.1	154.4	129.3	214
2002	91.2	64.2	27.0	181.4	154.4	241
2003	97.2	68.4	28.7	210.2	181.4	265
2004	103.4	73.2	30.2	240.4	210.2	287
High Cost:						
1995	57.6	43.6	14.1	37.0	22.9	53
1996	60.8	48.5	12.4	49.4	37.0	76
1997	59.1	53.6	5.5	54.8	49.4	92
1998	62.9	60.1	2.8	57.6	54.8	91
1999	65.0	68.0	-3.0	54.6	57.6	85
2000	71.4	75.3	-3.9	50.7	54.6	73
2001	75.5	83.3	-7.8	42.9	50.7	61
2002	79.1	91.8	-12.7	30.1	42.9	47
2003	82.3	100.8	-18.5	11.7	30.1	30
2004[4]	85.4	110.5	-25.1	-13.4	11.7	11

[1]Represents assets at beginning of year.

[2]Represents amounts shown in preceding column as a percentage of expenditures during the year. See text concerning interpretation of these ratios.

[3]Figures for 1994 represent actual experience.

[4]Under the high cost alternative, the DI Trust Fund would be depleted in 2004, when assets would become insufficient to pay benefits on time. Thus, figures shown under the high cost alternative for 2004 are theoretical. See text for details.

Note: Totals do not necessarily equal the sums of rounded components.

The continuing spread of Acquired Immunodeficiency Syndrome (AIDS) has contributed to the recent increases in DI awards.[1] Due to the extremely high mortality rates of affected individuals, the total number of disabled workers currently receiving benefits has not increased greatly as a result of AIDS. Although many aspects of the AIDS epidemic are well understood, there remains considerable uncertainty regarding future medical advances and future incidence of HIV infection. To reflect this uncertainty, the projected numbers of benefit awards to AIDS patients (and their projected longevity) are varied by alternative. Under the intermediate assumptions, benefit awards to persons with AIDS are projected to continue to increase through 2000 before beginning to decline. Under the low cost assumptions, the number of new awards begins to decline in the near future, while the number projected under the high cost assumptions increases at a rapid rate through 2000 before beginning to decline.

At the beginning of calendar year 1994, the assets of the DI Trust Fund represented 23 percent of annual expenditures. During 1994,

[1] Although the number of disability benefit awards is higher as a result of AIDS, this effect has been fully reflected in the projections shown in past annual reports. Thus, the greater number of awards due to AIDS does not account for the unexpectedly large increases in awards experienced since 1990.

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DI income exceeded DI expenditures by $14.0 billion, with the result that the trust fund ratio for the beginning of 1995 increased to about 54 percent. Under the intermediate and low cost sets of assumptions, income is estimated to exceed expenditures in each year of the short-range projection period. The increase in the trust fund ratio from 23 percent at the beginning of 1994 to 54 percent at the beginning of 1995, and the further increase to 142 percent at the beginning of 2003 on the basis of the intermediate assumptions, are largely due to the tax rate reallocation enacted in 1994. The slight decline in the trust fund ratio to 140 percent at the beginning of 2004 is an early warning of trouble for the DI Trust Fund soon after the short-range period.

Under the low cost assumptions, the trust fund ratio would increase rapidly to 287 percent at the beginning of 2004. Under the high cost assumptions, the assets of the DI Trust Fund would increase through 1998, decline steadily thereafter, and would be exhausted in 2004.

Because DI assets reach the level of 1 year's expenditures at the beginning of 1997 under the intermediate assumptions and would remain above that level in 1998 and later, the DI Trust Fund satisfies the Trustees' short-range test of financial adequacy. However, as indicated above, under the high cost assumptions not only does DI fail to meet the short-range test of financial adequacy, but the DI Trust Fund is exhausted near the end of the short-range projection period.

c. Combined OASI and DI Trust Fund Operations

The estimated operations and status of the OASI and DI Trust Funds, combined, during calendar years 1995-2004 on the basis of the three alternatives, are shown in table II.F3, together with figures on actual experience in 1994. These amounts are the sums of the corresponding figures shown in tables II.F1 and II.F2.

TABLE II.F3.—ESTIMATED OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, BY ALTERNATIVE, CALENDAR YEARS 1994-2004

[Amounts in billions]

Calendar year	Income	Expenditures	Net increase in funds	Funds at end of year	Trust fund	
					Amount[1]	Ratio[2]
1994[3]	$381.1	$323.0	$58.1	$436.4	$378.3	117
Intermediate:						
1995	405.3	340.1	65.3	501.7	436.4	128
1996	432.6	357.5	75.1	576.7	501.7	140
1997	457.3	376.0	81.3	658.1	576.7	153
1998	483.0	395.6	87.3	745.4	658.1	166
1999	509.4	417.1	92.3	837.7	745.4	179
2000	538.7	440.5	98.2	935.9	837.7	190
2001	570.7	465.5	105.2	1,041.1	935.9	201
2002	605.0	492.8	112.2	1,153.3	1,041.1	211
2003	641.8	522.3	119.5	1,272.8	1,153.3	221
2004	680.7	553.8	126.9	1,399.7	1,272.8	230
Low Cost:						
1995	408.1	338.9	69.1	505.5	436.4	129
1996	440.1	353.5	86.6	592.1	505.5	143
1997	469.7	369.5	100.1	692.2	592.1	160
1998	501.6	386.5	115.1	807.3	692.2	179
1999	534.9	404.5	130.4	937.7	807.3	200
2000	571.1	423.9	147.2	1,084.9	937.7	221
2001	608.7	443.9	164.9	1,249.8	1,084.9	244
2002	647.2	464.9	182.4	1,432.2	1,249.8	269
2003	688.6	487.2	201.4	1,633.5	1,432.2	294
2004	732.4	511.2	221.3	1,854.8	1,633.5	320
High Cost:						
1995	404.1	341.4	62.7	499.1	436.4	128
1996	424.0	362.9	61.1	560.2	499.1	138
1997	449.1	385.4	63.8	624.0	560.2	145
1998	482.4	415.9	66.6	690.6	624.0	150
1999	503.4	452.7	50.7	741.3	690.6	153
2000	530.8	484.6	46.2	787.5	741.3	153
2001	564.8	519.6	45.3	832.8	787.5	152
2002	598.2	556.7	41.5	874.3	832.8	150
2003	631.8	595.9	35.9	910.1	874.3	147
2004[4]	666.1	637.8	28.3	938.4	910.1	143

[1]Represents assets at beginning of year.

[2]Represents amounts shown in preceding column as a percentage of expenditures during the year. See text concerning interpretation of these ratios.

[3]Figures for 1994 represent actual experience.

[4]Under the high cost alternative, the DI Trust Fund would be depleted in 2004, when assets would become insufficient to pay benefits on time. Thus, figures shown for the combined trust funds under the high cost alternative for 2004 are theoretical. See text for details.

Note: Totals do not necessarily equal the sums of rounded components.

At the beginning of 1994, the trust fund ratio for the OASI and DI Trust Funds combined was 117 percent, as shown in table II.F3. During 1994, total income to the two trust funds was $58.1 billion higher than total expenditures. As a result of this increase, combined OASDI assets at the beginning of 1995 represented about 128 percent of estimated combined expenditures for the year. Based on the intermediate assumptions, the trust fund ratio for the combined funds is projected to increase substantially, to 230 percent by 2004. The

ratio would grow at an even faster rate under the low cost assumptions, reaching 320 percent at the beginning of the year 2004. Under the high cost assumptions, assets would grow more slowly, reach a maximum of 153 percent in 1999-2000, and decline to 143 percent at the beginning of 2004.

Under the intermediate assumptions, the total assets of the OASI and DI Trust Funds would remain above 100 percent of annual OASDI expenditures throughout the short-range projection period. Therefore, the combined trust funds meet the requirements of the short-range test of financial adequacy. Under the high cost assumptions, the fund ratio for OASI and DI combined would still remain above 100 percent through 2004 (although, as indicated in the section on long-range projections, the ratio would fall below this level shortly thereafter). Thus, even under adverse conditions the combined funds would satisfy the short-range test of financial adequacy, although by a narrower margin.

Section 215(i) of the Social Security Act includes a provision to stabilize automatic benefit increases in the event of high inflation at a time when the combined assets of the OASI and DI Trust Funds are at very low levels (see section II.E of this report). Under all three alternatives, the level of OASDI assets during 1995-2004 would substantially exceed the applicable threshold. Thus, the stabilizer provision would not be triggered during the short-range projection period under any of the sets of assumptions used in this report.

Figure II.F1 presents the estimated total assets of the OASI and DI Trust Funds at the end of each year 1995-2004, based on the three sets of assumptions (together with actual assets at the end of each year 1985-94). Figure II.F2 illustrates the pattern of actual past and estimated future OASDI trust fund ratios under the three alternatives. Trust fund ratios for selected years prior to 1995, and estimates for 1995-2004 under the three alternatives, are shown in table II.F4 for OASI, DI, and both funds combined. In evaluating the ratios shown in figure II.F2 and table II.F4, it should be recalled that a minimum of roughly 8 to 9 percent is generally needed to meet monthly cash-flow requirements. The shaded area in figure II.F2 depicts this requirement.

FIGURE II.F1.—ESTIMATED ASSETS AT END OF YEAR, FOR OASI AND DI TRUST FUNDS COMBINED, CALENDAR YEARS 1985-2004

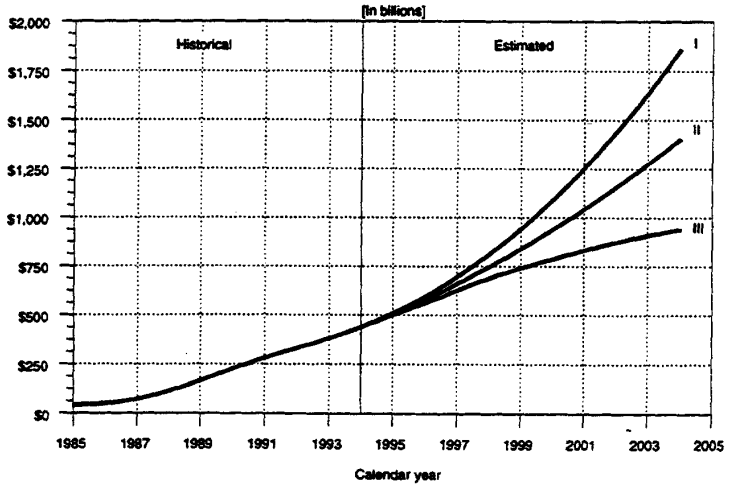


FIGURE II.F2.—ESTIMATED TRUST FUND RATIOS, FOR OASI AND DI TRUST FUNDS COMBINED, CALENDAR YEARS 1965-2004

[Assets as a percentage of annual expenditures]

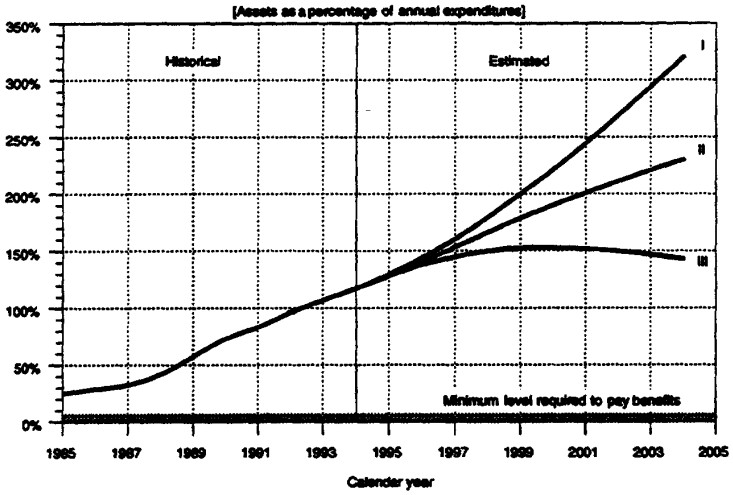


TABLE II.F4.—TRUST FUND RATIOS[1] BY TRUST FUND, SELECTED CALENDAR YEARS 1950-94, AND ESTIMATED FUTURE RATIOS BY ALTERNATIVE, CALENDAR YEARS 1995-2004

[In percent]

Calendar year	OASI Trust Fund	DI Trust Fund	OASI and DI Trust Funds, combined
Historical data:			
1950	1,156	—	1,156
1955	405	—	405
1960	180	304	186
1965	109	121	110
1970	101	126	103
1975	63	92	66
1980	23	35	25
1985	24	27	24
1986	28	38	29
1987	30	44	31
1988	41	38	41
1989	59	38	57
1990	78	40	75
1991	87	39	82
1992	103	40	96
1993	117	35	107
1994	130	23	117
Intermediate:			
1995	139	54	128
1996	149	82	140
1997	160	108	153
1998	174	119	166
1999	187	126	179
2000	200	130	190
2001	212	137	201
2002	224	141	211
2003	235	142	221
2004	246	140	230

TABLE II.F4.—TRUST FUND RATIOS[1] BY TRUST FUND, SELECTED CALENDAR YEARS 1950-94, AND ESTIMATED FUTURE RATIOS BY ALTERNATIVE, CALENDAR YEARS 1995-2004 (Cont.)

[In percent]

Calendar year	OASI Trust Fund	DI Trust Fund	OASI and DI Trust Funds, combined
Low Cost:			
1995	139	55	129
1996	151	88	143
1997	166	122	160
1998	184	145	179
1999	205	166	200
2000	226	187	221
2001	249	214	244
2002	273	241	269
2003	299	265	294
2004	325	287	320
High Cost:			
1995	139	53	128
1996	147	76	138
1997	154	92	145
1998	160	91	150
1999	165	85	153
2000	168	73	153
2001	169	61	152
2002	170	47	150
2003	170	30	147
2004[2]	170	11	143

[1]Represents assets at beginning of year as a percentage of expenditures during the year. For 1984-90, assets at beginning of year for each trust fund and the combined funds include the respective OASI and DI advance tax transfers for January.

[2]Figures for DI and OASI and DI combined are theoretical because of the projected depletion of the DI Trust Fund.

The estimated trust fund ratios for OASI, as shown in this report under all three alternatives, are slightly lower than the corresponding estimates in the 1994 Annual Report due to the reallocation of tax rates from OASI to DI enacted in 1994.

The factors underlying the changes in the intermediate estimates for the OASI Trust Fund, from last year's annual report to this year's, are analyzed in table II.F5. In the 1994 Annual Report, the trust fund ratio for OASI was estimated to reach 259 percent at the beginning of the year 2003—the tenth projection year from that report. The corresponding ratio shown in this report for the tenth projection year (2004) is 246 percent. As indicated in table II.F5, the largest single reason for this change is the legislative changes enacted since the last report, in particular the reallocation of a portion of the OASI tax rate to DI. If there had been no changes to the projections other than those necessitated by legislation, then the estimated ratio at the beginning of 2004 would have been 9 percentage points higher than at the beginning of 2003. There were changes, however, to reflect the latest actual data, as well as adjustments to the assumptions

for future years. The cumulative future effects of better than expected economic performance in 1994 resulted in an improvement to the trust fund ratio of 15 percentage points by the beginning of 2004. Finally, the net projected effects of recent declines in the rate at which beneficiaries decide to claim retirement benefits and changes in the rate of increase in average benefit levels contributed a 10 percentage point increase in the trust fund relative asset level.

Corresponding estimates of the factors underlying the changes in the financial projections for the DI Trust Fund, and for the OASI and DI Trust Funds combined, are also shown in table II.F5. As was the case for OASI, the key factors affecting the new estimates for the DI Trust Fund were reallocation of the OASI tax rate to the benefit of DI, and the cumulative effects of changes in assumptions related to economic performance and the rate at which benefits were claimed.

TABLE II.F5.—CHANGE IN OASI AND DI TRUST FUND RATIOS AT THE BEGINNING OF THE TENTH YEAR OF PROJECTION, BASED ON THE INTERMEDIATE ASSUMPTIONS, BY REASON FOR CHANGE

[In percent]

Item	OASI Trust Fund	DI Trust Fund	OASI and DI Trust Funds, combined
Trust fund ratio shown in last year's report for calendar year 2003 [1]	259	[2] –143	[2] 197
Change in trust fund ratio due to changes in:			
Public Laws 103-296 and 103-387	–47	257	(3)
Valuation period	9	–3	7
Demographic assumptions	(3)	(3)	(3)
Economic assumptions	15	10	15
Programmatic assumptions	10	19	11
Total change in trust fund ratio	–13	283	33
Trust fund ratio shown in this report for calendar year 2004	246	140	230

[1] Figures for DI, and for OASI and DI combined, are theoretical because of the depletion of the DI Trust Fund.

[2] Does not reflect advance tax transfers to the DI Trust Fund.

[3] Between –0.5 and 0.5 percent.

Note: Totals do not necessarily equal the sums of rounded components.

For the DI Trust Fund during 1995-2004, the estimated operations in this report under all three alternatives show a major improvement, primarily due to the tax rate reallocation enacted in 1994. As for benefit payments from the DI Trust Fund, the number of new disability awards to insured workers in 1994 was less than anticipated in last year's report, but (as noted earlier) the backlog of pending

disability claims continued to remain at a high level. The assumed disability incidence rates for the 1995 Annual Report are similar to the corresponding rates from the 1994 report, with a slight postponement in the reflection of awards that were delayed from 1993-94.

The overall disability termination rate experienced in 1994 was slightly lower than assumed under the intermediate assumptions of the 1994 Annual Report (9.5 percent versus 9.6 percent). Overall, the termination rate assumptions for this report were not changed significantly as compared to the 1994 Annual Report.

Table II.F6 shows that total expenditures in calendar year 1994 from the OASI and DI Trust Funds decreased to 11.48 percent of taxable payroll for the year—1.11 percentage points less than the income rate of 12.59 percent. This decrease in the total cost rate for OASDI is primarily attributable to the strong growth in the OASDI taxable payroll, as described previously. Under the intermediate assumptions, the OASDI cost rate would increase gradually during the short-range projection period, to 11.90 percent in 2004. Based on the low cost assumptions, the cost rate is estimated to decline steadily, reaching 10.46 percent in 2004. The high cost alternative indicates a significant increase, to 13.57 percent in 2004.

These cost rate projections are shown in table II.F6 for both trust funds, separately and combined. Table II.F6 also shows a comparison of the cost rates with the corresponding income rates. As explained previously, the income rate represents the sum of the combined employee-employer payroll tax rate and the income derived from the Federal income taxation of OASDI benefits, expressed as a percentage of taxable payroll. The difference between the income rate and the cost rate for a year is referred to as the "balance" for that year.

TABLE II.F6.—COMPARISON OF INCOME RATES AND COST RATES, BY TRUST FUND, SELECTED CALENDAR YEARS 1950-94, AND ESTIMATED RATES BY ALTERNATIVE, CALENDAR YEARS 1995-2004

[As a percentage of taxable payroll]

Calendar year	OASI Trust Fund			DI Trust Fund			OASI and DI, combined		
	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
Historical data:									
1950...	3.00	1.17	1.83	—	—	—	3.00	1.17	1.83
1955...	4.00	3.34	.66	—	—	—	4.00	3.34	.66
1960...	5.50	5.59	–.09	0.50	0.30	0.20	6.00	5.89	.11
1965...	6.75	7.23	–.48	.50	.70	–.20	7.25	7.93	–.68
1970...	7.30	7.32	–.02	1.10	.81	.29	8.40	8.12	.28
1975...	8.75	9.29	–.54	1.15	1.36	–.21	9.90	10.65	–.75
1980...	9.04	9.36	–.32	1.12	1.38	–.26	10.16	10.74	–.58
1985...	[1]10.71	9.94	.78	[1]1.07	1.13	–.06	[1]11.79	11.07	.72
1990[2]..	[1]11.32	9.66	1.66	[1]1.17	1.09	.09	[1]12.49	10.75	1.74
1991[2]..	11.44	10.15	1.29	1.21	1.18	.03	12.65	11.33	1.32
1992[2]..	11.43	10.27	1.16	1.21	1.26	–.06	12.64	11.53	1.11
1993[2]..	11.40	10.37	1.03	1.21	1.35	–.14	12.61	11.73	.89
1994[2]..	10.70	10.10	.60	1.89	1.38	.51	12.59	11.48	1.11
Intermediate:									
1995...	[1]10.69	10.05	.64	[1]1.89	1.44	.45	[1]12.58	11.49	1.09
1996...	10.73	10.03	.70	1.89	1.49	.40	12.62	11.52	1.10
1997...	10.91	10.01	.91	1.71	1.54	.17	12.62	11.54	1.08
1998...	10.92	10.01	.90	1.71	1.58	.13	12.63	11.59	1.03
1999...	10.92	10.03	.89	1.71	1.64	.08	12.63	11.66	.97
2000...	10.83	10.05	.78	1.81	1.68	.13	12.64	11.73	.91
2001...	10.83	10.05	.78	1.82	1.73	.09	12.65	11.78	.87
2002...	10.83	10.05	.79	1.82	1.77	.05	12.65	11.82	.83
2003...	10.84	10.05	.79	1.82	1.82	(3)	12.66	11.86	.79
2004...	10.84	10.04	.81	1.82	1.86	–.05	12.66	11.90	.76
Low Cost:									
1995...	[1]10.67	9.94	.73	[1]1.89	1.41	.48	[1]12.56	11.35	1.21
1996...	10.72	9.77	.95	1.89	1.41	.48	12.61	11.18	1.43
1997...	10.90	9.62	1.28	1.71	1.42	.29	12.61	11.04	1.58
1998...	10.90	9.49	1.41	1.71	1.42	.29	12.62	10.91	1.70
1999...	10.91	9.38	1.53	1.71	1.43	.28	12.62	10.81	1.81
2000...	10.81	9.28	1.53	1.81	1.44	.37	12.62	10.72	1.90
2001...	10.81	9.20	1.61	1.81	1.45	.36	12.62	10.65	1.98
2002...	10.81	9.12	1.69	1.81	1.46	.35	12.63	10.59	2.04
2003...	10.82	9.05	1.77	1.81	1.48	.34	12.63	10.52	2.11
2004...	10.82	8.97	1.85	1.81	1.50	.32	12.63	10.46	2.17
High Cost:									
1995...	[1]10.71	10.12	.60	[1]1.89	1.48	.41	[1]12.61	11.60	1.01
1996...	10.74	10.38	.36	1.89	1.60	.29	12.63	11.97	.65
1997...	10.92	10.36	.56	1.71	1.68	.04	12.63	12.04	.59
1998...	10.92	10.43	.50	1.71	1.76	–.05	12.64	12.19	.45
1999...	10.94	10.91	.03	1.72	1.93	–.21	12.66	12.84	–.18
2000...	10.85	11.01	–.17	1.82	2.03	–.21	12.67	13.04	–.38
2001...	10.85	11.04	–.19	1.82	2.11	–.29	12.67	13.15	–.48
2002...	10.86	11.09	–.23	1.82	2.19	–.37	12.68	13.28	–.60
2003...	10.87	11.15	–.29	1.82	2.27	–.45	12.69	13.42	–.74
2004...	10.87	11.22	–.35	1.82	2.35	–.53	12.69	13.57	–.87

[1]Income rates for 1985, 1990, and 1995 are modified to include adjustments to the lump-sum payments received in 1983 from the general fund of the Treasury for the cost of noncontributory wage credits for military service in 1940-56.

[2]Figures shown are preliminary.

[3]Between –0.005 and 0.005 percent of taxable payroll.

Notes:

1. The income rate excludes interest income and certain transfers from the general fund of the Treasury.
2. Totals do not necessarily equal the sums of rounded components.

Actuarial Estimates

Estimates of the operations of the trust funds during calendar years 1995-2004 have been presented in the preceding tables on the basis of three different sets of economic assumptions, because of the uncertainty of future economic and demographic developments. Under the provisions of the Social Security Act, estimates of the expected operations and status of the trust funds during the next 5 *fiscal* years are required to be shown in this report. Accordingly, detailed estimates of the expected operations and status of the trust funds during fiscal years 1995-99 are shown in the remaining tables of this section for the intermediate assumptions (alternative II) only. Similar detailed estimates are also shown for 5 additional fiscal years (2000-04) and on a calendar-year basis for 1995-2004.

Data on the actual operations of the OASI Trust Fund for selected years during 1940-94 and estimates of the expected operations of the trust fund during 1995-2004 on the basis of the intermediate assumptions, are shown in tables II.F7 and II.F8 on a fiscal- and calendar-year basis, respectively. Corresponding figures on the operations of the DI Trust Fund are shown in tables II.F9 and II.F10. Operations of both trust funds combined are shown in tables II.F11 and II.F12. (Data relating to the operations of the two trust funds for years not shown in tables II.F7-II.F12 are contained in past annual reports.) The figures shown in tables II.F8, II.F10, and II.F12 for 1987, 1988, 1992, and 1993 are adjusted to reflect 12 months of benefit payments in each year. The amounts estimated for 1998 and 1999 are similarly adjusted.

TABLE II.F7.—OPERATIONS OF THE OASI TRUST FUND DURING SELECTED FISCAL YEARS 1940-94 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1995-2004, ON THE BASIS OF THE INTERMEDIATE SET OF ASSUMPTIONS

[In millions]

Fiscal year [1]	Income				
	Total	Net contributions [2]	Income from taxation of benefits	Payments from the general fund of the Treasury [3]	Net interest [4]
Historical data:					
1940	$592	$550	—	—	$42
1945	1,434	1,310	—	—	124
1950	2,367	2,106	—	$4	257
1955	5,525	5,087	—	—	438
1960	10,360	9,843	—	—	517
1965	16,443	15,857	—	—	586
1970	31,746	29,955	—	442	1,350
1975	58,757	56,017	—	447	2,292
1980	100,051	97,608	—	557	1,886
1985	179,881	175,305	$3,151	105	1,321
1986	195,331	187,007	3,329	2,293	2,701
1987	206,846	199,554	3,323	69	3,900
1988	235,720	226,409	3,335	55	5,922
1989	260,457	247,116	3,638	43	9,660
1990	278,607	261,506	2,924	34	14,143
1991	293,288	270,841	5,790	−2,089	18,746
1992	307,102	278,506	6,019	19	22,557
1993	319,298	287,569	5,893	14	25,822
1994	342,263	308,397	5,351	10	28,505
Estimates:					
1995	327,933	291,252	5,116	7	31,558
1996	364,094	323,411	6,360	−1,124	35,448
1997	389,351	342,892	6,772	3	39,684
1998	413,283	361,256	7,245	3	44,780
1999	435,844	377,986	7,758	2	50,098
2000	457,947	393,940	8,331	1	55,675
2001	484,171	413,800	8,950	1	61,420
2002	513,251	436,075	9,621	1	67,555
2003	544,747	460,392	10,350	(5)	74,004
2004	578,390	486,474	11,134	(5)	80,781

[1]Under the Congressional Budget Act of 1974 (Public Law 93-344), fiscal years 1977 and later consist of the 12 months ending on September 30 of each year. Fiscal years prior to 1977 consisted of the 12 months ending on June 30 of each year.

[2]Beginning in 1983, includes transfers from general fund of Treasury representing contributions that would have been paid on deemed wage credits for military service in 1957 and later, if such credits were considered to be covered wages.

[3]Includes payments (1) in 1947-52 and in 1967 and later, for costs of noncontributory wage credits for military service performed before 1957; (2) in 1972-83, for costs of deemed wage credits for military service performed after 1956; and (3) in 1969 and later, for costs of benefits to certain uninsured persons who attained age 72 before 1968.

[4]Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in October 1973, the figures shown include relatively small amounts of gifts to the fund. Net interest for 1983-86 reflects payments from a borrowing trust fund to a lending trust fund for interest on amounts owed under the interfund borrowing provisions. During 1983-91, interest paid from the trust fund to the general fund on advance tax transfers is reflected. The amounts shown for 1985 and 1986 include interest adjustments of $76.5 million and $11.5 million, respectively, on unnegotiated checks issued before April 1985.

[5]Less than $500,000.

TABLE II.F7.—OPERATIONS OF THE OASI TRUST FUND DURING SELECTED FISCAL YEARS 1940-94 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1995-2004, ON THE BASIS OF THE INTERMEDIATE SET OF ASSUMPTIONS (Con't)

[In millions]

Fiscal year	Expenditures				Assets	
	Total	Benefit payments [6]	Administrative expenses	Transfers to Railroad Retirement program	Net increase during year	Amount at end of period
Historical data:						
1940	$28	$16	$12	—	$564	$1,745
1945	267	240	27	—	1,167	6,613
1950	784	727	57	—	1,583	12,893
1955	4,427	4,333	103	–$10	1,098	21,141
1960	11,073	10,270	202	600	–713	20,829
1965	15,962	15,226	300	436	482	20,180
1970	27,321	26,268	474	579	4,425	32,616
1975	56,676	54,847	848	982	2,081	39,948
1980	103,228	100,626	1,160	1,442	–3,177	24,566
1985	169,210	165,310	1,589	2,310	[7] 6,308	33,877
1986	178,534	174,340	1,609	2,585	[7] 3,642	37,519
1987	186,101	182,003	1,541	2,557	20,745	58,265
1988	197,021	192,502	1,729	2,790	38,700	96,964
1989	209,102	204,600	1,657	2,845	51,355	148,319
1990	223,481	218,948	1,564	2,969	55,126	203,445
1991	241,316	236,195	1,746	3,375	51,972	255,417
1992	256,239	251,268	1,823	3,148	50,862	306,280
1993	269,934	264,561	2,021	3,353	49,364	355,644
1994	281,572	276,278	1,874	3,420	60,691	416,335
Estimates:						
1995	293,815	288,494	1,653	3,669	34,118	450,453
1996	307,749	301,825	2,203	3,721	56,345	506,798
1997	322,200	316,235	2,242	3,724	67,151	573,949
1998	337,663	331,735	2,147	3,780	75,621	649,570
1999	354,290	348,287	2,167	3,836	81,554	731,124
2000	372,530	366,396	2,218	3,917	85,416	816,541
2001	392,174	385,905	2,279	3,990	91,997	908,538
2002	413,522	407,071	2,346	4,106	99,729	1,008,266
2003	436,509	429,882	2,417	4,210	108,238	1,116,504
2004	460,821	454,017	2,492	4,313	117,568	1,234,073

[6]Beginning in 1967, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks.

[7]Reflects offset for repayment from the OASI Trust Fund of amounts borrowed from the DI and HI Trust Funds in 1982. The amount repaid in 1985 was $4,364 million; in 1986, the amount was $13,155 million.

Note: Totals do not necessarily equal the sums of rounded components.

TABLE II.F8.—OPERATIONS OF THE OASI TRUST FUND DURING SELECTED CALENDAR YEARS 1940-94 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1995-2004, ON THE BASIS OF THE INTERMEDIATE SET OF ASSUMPTIONS

[In millions]

	Income				
Calendar year	Total	Net contributions [1]	Income from taxation of benefits	Payments from the general fund of the Treasury [2]	Net interest [3]
Historical data:					
1940	$368	$325	—	—	$43
1945	1,420	1,285	—	—	134
1950	2,928	2,667	—	$4	257
1955	6,167	5,713	—	—	454
1960	11,382	10,866	—	—	516
1965	16,610	16,017	—	—	593
1970	32,220	30,256	—	449	1,515
1975	59,605	56,619	—	622	2,364
1980	105,841	103,355	—	641	1,845
1985	184,239	176,958	$3,208	2,203	1,871
1986	197,393	190,741	3,424	160	3,069
1987	210,736	202,735	3,257	55	4,690
1988	240,770	229,775	3,384	43	7,568
1989	264,653	250,195	2,439	34	11,985
1990	286,653	267,530	4,848	−2,089	16,363
1991	299,286	272,574	5,864	19	20,829
1992	311,162	280,992	5,852	14	24,303
1993	323,277	290,905	5,335	10	27,027
1994	328,271	293,323	4,995	7	29,946
Estimates:					
1995	347,394	308,886	6,092	−1,124	33,540
1996	370,403	326,492	6,453	3	37,454
1997	396,826	347,797	6,880	3	42,147
1998	419,415	364,633	7,367	2	47,412
1999	442,438	381,697	7,890	1	52,849
2000	464,431	397,441	8,479	1	58,510
2001	491,900	418,364	9,108	1	64,428
2002	521,634	441,117	9,794	(4)	70,723
2003	553,619	465,743	10,537	(4)	77,339
2004	587,556	492,012	11,337	(4)	84,206

[1]Beginning in 1983, includes transfers from general fund of Treasury representing contributions that would have been paid on deemed wage credits for military service in 1957 and later, if such credits were considered to be covered wages.

[2]Includes payments (1) in 1947-51 and in 1966 and later, for costs of noncontributory wage credits for military service performed before 1957; (2) in 1971-82, for costs of deemed wage credits for military service performed after 1956; and (3) in 1968 and later, for costs of benefits to certain uninsured persons who attained age 72 before 1968.

[3]Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in October 1973, the figures shown include relatively small amounts of gifts to the fund. Net interest for 1983-86 reflects payments from a borrowing trust fund to a lending trust fund for interest on amounts owed under the interfund borrowing provisions. During 1983-90, interest paid from the trust fund to the general fund on advance tax transfers is reflected. The amount shown for 1985 includes an interest adjustment of $88 million on unnegotiated checks issued before April 1985.

[4]Less than $500,000.

TABLE II.F8.—OPERATIONS OF THE OASI TRUST FUND DURING SELECTED CALENDAR YEARS 1940-94 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1995-2004, ON THE BASIS OF THE INTERMEDIATE SET OF ASSUMPTIONS (Con't)

[In millions]

Calendar year	Expenditures				Assets	
	Total	Benefit payments [5]	Administrative expenses	Transfers to Railroad Retirement program	Net increase during year	Amount at end of period
Historical data:						
1940	$62	$35	$26	—	$306	$2,031
1945	304	274	30	—	1,116	7,121
1950	1,022	961	61	—	1,905	13,721
1955	5,079	4,968	119	–$7	1,087	21,653
1960	11,198	10,677	203	318	184	20,324
1965	17,501	16,737	328	436	–890	18,235
1970	29,848	28,798	471	579	2,371	32,454
1975	60,395	58,517	896	982	–789	36,987
1980	107,678	105,082	1,154	1,442	–1,837	22,824
1985	171,150	167,248	1,592	2,310	[6] 8,725	35,842
1986	181,000	176,813	1,601	2,585	[6] 3,239	39,081
1987	187,668	183,587	1,524	2,557	23,068	62,149
1988	200,020	195,454	1,776	2,790	40,750	102,899
1989	212,489	207,971	1,673	2,845	52,164	155,063
1990	227,519	222,967	1,563	2,969	59,134	214,197
1991	245,634	240,467	1,792	3,375	53,652	267,849
1992	259,861	254,883	1,830	3,148	51,301	319,150
1993	273,104	267,755	1,996	3,353	50,173	369,322
1994	284,133	279,068	1,645	3,420	44,138	413,460
Estimates:						
1995	297,344	291,705	1,971	3,669	50,050	463,510
1996	311,157	305,223	2,213	3,721	59,246	522,756
1997	325,897	319,955	2,218	3,724	70,929	593,685
1998	341,623	335,690	2,152	3,780	77,792	671,477
1999	358,566	352,550	2,180	3,836	83,872	755,349
2000	377,222	371,072	2,233	3,917	87,209	842,558
2001	397,174	390,888	2,296	3,990	94,727	937,285
2002	419,008	412,538	2,364	4,106	102,627	1,039,911
2003	442,339	435,693	2,436	4,210	111,281	1,151,192
2004	467,073	460,248	2,512	4,313	120,483	1,271,675

[5]Beginning in 1966, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks.

[6]Reflects offset for repayment from the OASI Trust Fund of amounts borrowed from the DI and HI Trust Funds in 1982. The amount repaid in 1985 was $4,364 million; in 1986, the amount was $13,155 million.

Note: Totals do not necessarily equal the sums of rounded components.

TABLE II.F9.—OPERATIONS OF THE DI TRUST FUND DURING SELECTED FISCAL YEARS 1960-94 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1995-2004, ON THE BASIS OF THE INTERMEDIATE SET OF ASSUMPTIONS

[In millions]

	Income				
Fiscal year [1]	Total	Net contributions [2]	Income from taxation of benefits	Payments from the general fund of the Treasury [3]	Net interest [4]
Historical data:					
1960	$1,034	$987	—	—	$47
1965	1,237	1,175	—	—	62
1970	4,380	4,141	—	$16	223
1975	7,920	7,356	—	52	512
1980	17,376	16,805	—	118	453
1985	17,984	16,876	$217	—	891
1986	20,130	18,139	229	1,017	746
1987	20,047	19,324	[5] −16	—	738
1988	22,369	21,736	56	—	577
1989	24,479	23,694	135	—	650
1990	28,215	27,291	158	—	766
1991	29,322	28,953	131	−775	1,014
1992	31,168	29,871	218	—	1,080
1993	32,056	30,822	268	—	966
1994	34,044	33,041	305	—	699
Estimates:					
1995	70,585	68,363	335	—	1,887
1996	61,034	57,796	362	−41	2,917
1997	60,678	56,262	398	—	4,018
1998	62,643	57,376	438	—	4,828
1999	66,022	60,047	484	—	5,491
2000	72,355	65,730	534	—	6,090
2001	77,673	70,273	589	—	6,810
2002	82,196	74,053	650	—	7,493
2003	86,960	78,176	718	—	8,086
2004	91,963	82,606	794	—	8,563

[1]Under the Congressional Budget Act of 1974 (Public Law 93-344), fiscal years 1977 and later consist of the 12 months ending on September 30 of each year. Fiscal years prior to 1977 consisted of the 12 months ending on June 30 of each year.

[2]Beginning in 1983, includes transfers from general fund of Treasury representing contributions that would have been paid on deemed wage credits for military service in 1957 and later, if such credits were considered to be covered wages.

[3]Includes payments (1) in 1966 and later, for costs of noncontributory wage credits for military service performed before 1957; and (2) in 1971-82, for costs of deemed wage credits for military service performed after 1956.

[4]Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in July 1974, the figures shown include relatively small amounts of gifts to the fund. Net interest for 1983-86 reflects payments from a borrowing trust fund to a lending trust fund for interest on amounts owed under the interfund borrowing provisions. During 1983-90, interest paid from the trust fund to the general fund on advance tax transfers is reflected. The amount shown for 1985 includes an interest adjustment of $14.8 million on unnegotiated checks issued before April 1985.

[5]Reflects $195 million in transfers from the DI Trust Fund to the general fund of the Treasury to correct estimated amounts transferred for calendar years 1984 and 1985.

TABLE II.F9.—OPERATIONS OF THE DI TRUST FUND DURING SELECTED FISCAL YEARS 1960-94 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1995-2004, ON THE BASIS OF THE INTERMEDIATE SET OF ASSUMPTIONS (Con't)

[In millions]

Fiscal year	Expenditures				Assets	
	Total	Benefit payments [6]	Administrative expenses	Transfers to Railroad Retirement program	Net increase during year	Amount at end of period
Historical data:						
1960	$533	$528	$32	-$27	$501	$2,167
1965	1,495	1,392	79	24	-257	2,007
1970	2,954	2,795	149	10	1,426	5,104
1975	7,982	7,701	253	29	-62	8,191
1980	15,320	14,998	334	-12	2,056	7,680
1985	19,294	18,648	603	43	[7] 1,230	5,873
1986	20,196	19,529	600	68	[7] 2,475	8,348
1987	21,222	20,427	738	57	-1,175	7,173
1988	22,269	21,405	803	61	100	7,273
1989	23,389	22,550	751	88	1,090	8,363
1990	25,124	24,327	717	80	3,091	11,455
1991	27,780	26,909	789	82	1,543	12,997
1992	31,285	30,382	845	58	-116	12,881
1993	34,632	33,615	935	83	-2,576	10,305
1994	37,979	36,851	1,022	106	-3,935	6,370
Estimates:						
1995	41,713	40,596	1,070	47	28,872	35,242
1996	45,465	44,225	1,216	24	15,568	50,811
1997	49,164	47,885	1,247	32	11,514	62,325
1998	53,030	51,714	1,256	60	9,613	71,938
1999	57,384	55,995	1,312	76	8,638	80,576
2000	62,051	60,579	1,385	87	10,303	90,880
2001	67,024	65,469	1,467	88	10,649	101,528
2002	72,426	70,769	1,555	101	9,771	111,299
2003	78,353	76,585	1,651	116	8,628	119,927
2004	84,997	83,111	1,755	131	6,966	126,893

Beginning in 1967, includes payments for vocational rehabilitation services furnished to disabled ersons receiving benefits because of their disabilities. Beginning in 1983, amounts are reduced by mount of reimbursement for unnegotiated benefit checks.

Reflects repayment from the OASI Trust Fund of amounts borrowed from the DI Trust Fund in 1982. he amount repaid in 1985 was $2,540 million; in 1986, the amount was $2,541 million.

lote: Totals do not necessarily equal the sums of rounded components.

TABLE II.F10.—OPERATIONS OF THE DI TRUST FUND DURING SELECTED CALENDAR YEARS 1960-94 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1995-2004, ON THE BASIS OF THE INTERMEDIATE SET OF ASSUMPTIONS

[In millions]

	Income				
Calendar year	Total	Net contributions [1]	Income from taxation of benefits	Payments from the general fund of the Treasury [2]	Net interest [3]
Historical data:					
1960	$1,063	$1,010	—	—	$53
1965	1,247	1,188	—	—	59
1970	4,774	4,481	—	$16	277
1975	8,035	7,444	—	90	502
1980	13,871	13,255	—	130	485
1985	19,301	17,191	$222	1,017	870
1986	19,439	18,399	238	—	803
1987	20,303	19,691	[4] −36	—	648
1988	22,699	22,039	61	—	600
1989	24,795	23,993	95	—	707
1990	28,791	28,539	144	−775	883
1991	30,390	29,137	190	—	1,063
1992	31,430	30,136	232	—	1,062
1993	32,301	31,185	281	—	835
1994	52,841	51,373	311	—	1,157
Estimates:					
1995	57,930	55,273	338	−41	2,360
1996	62,205	58,347	370	—	3,487
1997	60,468	55,606	408	—	4,454
1998	63,536	57,918	449	—	5,169
1999	66,920	60,640	496	—	5,784
2000	74,234	67,247	547	—	6,440
2001	78,810	71,048	604	—	7,159
2002	83,371	74,908	666	—	7,797
2003	88,159	79,086	736	—	8,338
2004	93,095	83,548	814	—	8,733

[1]Beginning in 1983, includes transfers from general fund of Treasury representing contributions that would have been paid on deemed wage credits for military service in 1957 and later, if such credits were considered to be covered wages.

[2]Includes payments (1) in 1966 and later, for costs of noncontributory wage credits for military service performed before 1957; and (2) in 1971-82, for costs of deemed wage credits for military service performed after 1956.

[3]Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in July 1974, the figures shown include relatively small amounts of gifts to the fund. Net interest for 1983-86 reflects payments from a borrowing trust fund to a lending trust fund for interest on amounts owed under the interfund borrowing provisions. During 1983-90, interest paid from the trust fund to the general fund on advance tax transfers is reflected. The amount shown for 1985 includes an interest adjustment of $14.8 million on unnegotiated checks issued before April 1985.

[4]Reflects $195 million in transfers from the DI Trust Fund to the general fund of the Treasury to correct estimated amounts transferred for calendar years 1984 and 1985.

TABLE II.F10.—OPERATIONS OF THE DI TRUST FUND DURING SELECTED CALENDAR YEARS 1960-94 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1995-2004, ON THE BASIS OF THE INTERMEDIATE SET OF ASSUMPTIONS (Con't)

[In millions]

Calendar year	Expenditures				Assets	
	Total	Benefit payments [5]	Administrative expenses	Transfers to Railroad Retirement program	Net increase during year	Amount at end of period
Historical data:						
1960	$600	$568	$36	–$5	$464	$2,289
1965	1,687	1,573	90	24	–440	1,606
1970	3,259	3,085	164	10	1,514	5,614
1975	8,790	8,505	256	29	–754	7,354
1980	15,872	15,515	368	–12	–2,001	3,629
1985	19,478	18,827	608	43	[6] 2,363	6,321
1986	20,522	19,853	600	68	[6] 1,459	7,780
1987	21,425	20,519	849	57	–1,122	6,658
1988	22,494	21,695	737	61	206	6,864
1989	23,753	22,911	754	88	1,041	7,905
1990	25,616	24,829	707	80	3,174	11,079
1991	28,571	27,695	794	82	1,819	12,898
1992	32,004	31,112	834	58	–574	12,324
1993	35,662	34,613	966	83	–3,361	8,963
1994	38,879	37,744	1,029	106	13,962	22,925
Estimates:						
1995	42,713	41,557	1,109	47	15,217	38,142
1996	46,361	45,114	1,223	24	15,844	53,986
1997	50,087	48,806	1,249	32	10,381	64,367
1998	54,021	52,693	1,268	60	9,515	73,882
1999	58,493	57,088	1,329	76	8,427	82,309
2000	63,236	61,745	1,403	87	10,999	93,308
2001	68,300	66,725	1,486	88	10,511	103,819
2002	73,801	72,123	1,577	101	9,570	113,389
2003	79,927	78,137	1,674	116	8,232	121,621
2004	86,701	84,790	1,779	131	6,394	128,015

[5]Beginning in 1966, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks.

[6]Reflects repayment from the OASI Trust Fund of amounts borrowed from the DI Trust Fund in 1982. The amount repaid in 1985 was $2,540 million; in 1986, the amount was $2,541 million.

Note: Totals do not necessarily equal the sums of rounded components.

Actuarial Analysis

TABLE II.F11.—OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING SELECTED FISCAL YEARS 1960-94 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1995-2004, ON THE BASIS OF THE INTERMEDIATE SET OF ASSUMPTIONS

[In millions]

Fiscal year [1]	Income				
	Total	Net contributions [2]	Income from taxation of benefits	Payments from the general fund of the Treasury [3]	Net interest [4]
Historical data:					
1960	$11,394	$10,830	—	—	$564
1965	17,681	17,032	—	—	648
1970	36,127	34,096	—	$458	1,572
1975	66,677	63,374	—	499	2,804
1980	117,427	114,413	—	675	2,339
1985	197,865	192,181	$3,368	105	2,211
1986	215,461	205,146	3,558	3,310	3,447
1987	226,893	218,878	3,307	69	4,638
1988	258,090	248,145	3,390	55	6,500
1989	284,936	270,811	3,772	43	10,310
1990	306,822	288,797	3,081	34	14,909
1991	322,611	299,794	5,921	−2,864	19,759
1992	338,270	308,377	6,237	19	23,637
1993	351,354	318,391	6,161	14	26,788
1994	376,307	341,438	5,656	10	29,203
Estimates:					
1995	398,518	359,615	5,451	7	33,445
1996	425,127	381,207	6,721	−1,165	38,364
1997	450,029	399,154	7,170	3	43,702
1998	475,926	418,632	7,683	3	49,609
1999	501,866	438,033	8,242	2	55,589
2000	530,301	459,670	8,865	1	61,765
2001	561,844	484,073	9,539	1	68,231
2002	595,447	510,128	10,271	1	75,048
2003	631,727	538,568	11,068	(5)	82,090
2004	670,352	569,080	11,928	(5)	89,344

[1]Under the Congressional Budget Act of 1974 (Public Law 93-344), fiscal years 1977 and later consist of the 12 months ending on September 30 of each year. Fiscal years prior to 1977 consisted of the 12 months ending on June 30 of each year.

[2]Beginning in 1983, includes transfers from general fund of Treasury representing contributions that would have been paid on deemed wage credits for military service in 1957 and later, if such credits were considered to be covered wages.

[3]Includes payments (1) in 1947-52 and in 1967 and later, for costs of noncontributory wage credits for military service performed before 1957; (2) in 1972-83, for costs of deemed wage credits for military service performed after 1956; and (3) in 1969 and later, for costs of benefits to certain uninsured persons who attained age 72 before 1968.

[4]Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust funds on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in October 1973, the figures shown include relatively small amounts of gifts to the funds. Net interest for 1983-86 reflects payments from a borrowing trust fund to a lending trust fund for interest on amounts owed under the interfund borrowing provisions. During 1983-91, interest paid from the trust funds to the general fund of the Treasury on advance tax transfers is reflected. The amounts shown for 1985 and 1986 include interest adjustments of $91.3 million and $11.5 million, respectively, on unnegotiated checks issued before April 1985.

[5]Less than $500,000.

TABLE II.F11.—OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING SELECTED FISCAL YEARS 1960-94 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1995-2004, ON THE BASIS OF THE INTERMEDIATE SET OF ASSUMPTIONS (Con't)

[in millions]

	Expenditures				Assets	
Fiscal year	Total	Benefit payments [6]	Administrative expenses	Transfers to Railroad Retirement program	Net increase during year	Amount at end of period
Historical data:						
1960	$11,606	$10,798	$234	$574	−$212	$22,996
1965	17,456	16,618	379	459	224	22,187
1970	30,275	29,063	623	589	5,851	37,720
1975	64,658	62,547	1,101	1,010	2,018	48,138
1980	118,548	115,624	1,494	1,430	−1,121	32,246
1985	188,504	183,959	2,192	2,353	[7] 7,538	39,750
1986	198,730	193,869	2,209	2,653	[7] 6,117	45,867
1987	207,323	202,430	2,279	2,614	19,570	65,437
1988	219,290	213,907	2,532	2,851	38,800	104,237
1989	232,491	227,150	2,407	2,934	52,445	156,682
1990	248,605	243,275	2,280	3,049	58,217	214,900
1991	269,096	263,104	2,535	3,457	53,515	268,415
1992	287,524	281,650	2,668	3,206	50,746	319,161
1993	304,566	298,176	2,955	3,435	46,788	365,949
1994	319,551	313,129	2,896	3,526	56,757	422,706
Estimates:						
1995	335,529	329,090	2,723	3,716	62,989	485,695
1996	353,214	346,050	3,419	3,745	71,913	557,609
1997	371,364	364,120	3,489	3,755	78,665	636,274
1998	390,692	383,449	3,403	3,840	85,234	721,508
1999	411,673	404,281	3,480	3,912	90,193	811,701
2000	434,581	426,975	3,603	4,004	95,720	907,420
2001	459,198	451,374	3,746	4,078	102,646	1,010,066
2002	485,948	477,839	3,901	4,207	109,500	1,119,565
2003	514,861	506,467	4,068	4,326	116,866	1,236,431
2004	545,818	537,127	4,247	4,444	124,534	1,360,966

[6]Beginning in 1967, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks.

[7]Reflects offset for repayment from the OASI Trust Fund of amounts borrowed from the HI Trust Fund in 1982. The amount repaid in 1985 was $1,824 million; in 1986, the amount was $10,613 million.

Note: Totals do not necessarily equal the sums of rounded components.

Actuarial Analysis

TABLE II.F12.—OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING SELECTED CALENDAR YEARS 1960-94 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1995-2004, ON THE BASIS OF THE INTERMEDIATE SET OF ASSUMPTIONS

[In millions]

Calendar year	Income				
	Total	Net contributions [1]	Income from taxation of benefits	Payments from the general fund of the Treasury [2]	Net interest [3]
Historical data:					
1960	$12,445	$11,876	—	—	$569
1965	17,857	17,205	—	—	651
1970	36,993	34,737	—	$465	1,791
1975	67,640	64,259	—	515	2,866
1980	119,712	116,711	—	670	2,330
1985	203,540	194,149	$3,430	3,220	2,741
1986	216,833	209,140	3,662	160	3,871
1987	231,039	222,425	3,221	55	5,338
1988	263,469	251,814	3,445	43	8,168
1989	289,448	274,189	2,534	34	12,692
1990	315,443	296,070	4,992	−2,864	17,245
1991	329,676	301,711	6,054	19	21,892
1992	342,591	311,128	6,084	14	25,365
1993	355,578	322,090	5,616	10	27,862
1994	381,111	344,695	5,306	7	31,103
Estimates:					
1995	405,325	364,159	6,430	−1,165	35,901
1996	432,608	384,839	6,823	3	40,942
1997	457,294	403,403	7,288	3	46,601
1998	482,950	422,551	7,816	2	52,581
1999	509,358	442,337	8,386	1	58,634
2000	538,665	464,688	9,027	1	64,950
2001	570,711	489,412	9,711	1	71,586
2002	605,006	516,025	10,460	(4)	78,520
2003	641,779	544,829	11,273	(4)	85,677
2004	680,650	575,560	12,151	(4)	92,939

[1]Beginning in 1983, includes transfers from general fund of Treasury representing contributions that would have been paid on deemed wage credits for military service in 1957 and later, if such credits were considered to be covered wages.

[2]Includes payments (1) in 1947-51 and in 1966 and later, for costs of noncontributory wage credits for military service performed before 1957; (2) in 1971-82, for costs of deemed wage credits for military service performed after 1956; and (3) in 1968 and later, for costs of benefits to certain uninsured persons who attained age 72 before 1968.

[3]Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust funds on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in October 1973, the figures shown include relatively small amounts of gifts to the funds. Net interest for 1983-86 reflects payments from a borrowing trust fund to a lending trust fund for interest on amounts owed under the interfund borrowing provisions. During 1983-90, interest paid from the trust funds to the general fund of the Treasury on advance tax transfers is reflected. The amount shown for 1985 includes an interest adjustment of $102.8 million on unnegotiated checks issued before April 1985.

[4]Less than $500,000.

TABLE II.F12.—OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING SELECTED CALENDAR YEARS 1960-94 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1995-2004, ON THE BASIS OF THE INTERMEDIATE SET OF ASSUMPTIONS (Con't)

[In millions]

	Expenditures				Assets	
Calendar year	Total	Benefit payments [5]	Administrative expenses	Transfers to Railroad Retirement program	Net increase during year	Amount at end of period
Historical data:						
1960	$11,798	$11,245	$240	$314	$647	$22,613
1965	19,187	18,311	418	459	−1,331	19,841
1970	33,108	31,884	635	589	3,886	38,068
1975	69,184	67,022	1,152	1,010	−1,544	44,342
1980	123,550	120,598	1,522	1,430	−3,838	26,453
1985	190,628	186,075	2,200	2,353	[6] 11,088	42,163
1986	201,522	196,667	2,202	2,653	[6] 4,698	46,861
1987	209,093	204,106	2,373	2,614	21,946	68,807
1988	222,514	217,149	2,513	2,851	40,955	109,762
1989	236,242	230,882	2,427	2,934	53,206	162,968
1990	253,135	247,816	2,270	3,049	62,309	225,277
1991	274,205	268,162	2,587	3,457	55,471	280,747
1992	291,865	285,995	2,684	3,206	50,726	331,473
1993	308,766	302,368	2,963	3,435	46,812	378,285
1994	323,011	316,812	2,674	3,526	58,100	436,385
Estimates:						
1995	340,058	333,262	3,080	3,716	65,267	501,652
1996	357,518	350,337	3,436	3,745	75,090	576,742
1997	375,984	368,762	3,467	3,755	81,310	658,052
1998	395,644	388,383	3,421	3,840	87,307	745,359
1999	417,059	409,638	3,509	3,912	92,299	837,659
2000	440,457	432,817	3,636	4,004	98,208	935,866
2001	465,473	457,613	3,782	4,078	105,237	1,041,103
2002	492,809	484,661	3,940	4,207	112,197	1,153,300
2003	522,266	513,830	4,110	4,326	119,513	1,272,813
2004	553,774	545,039	4,291	4,444	126,877	1,399,690

[5] Beginning in 1966, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1963, amounts are reduced by amount of reimbursement for unnegotiated benefit checks.

[6] Reflects offset for repayment from the OASI Trust Fund of amounts borrowed from the HI Trust Fund in 1982. The amount repaid in 1985 was $1,824 million; in 1986, the amount was $10,613 million.

Note: Totals do not necessarily equal the sums of rounded components.

2. Long-Range Actuarial Status of the Trust Funds

Historically, the actuarial balance (described earlier in this section) has been used as the principal measure of the actuarial status of the OASDI program. Actuarial balances have traditionally been computed for the 25-year valuation period encompassing 1995-2019, the 50-year valuation period covering 1995-2044, and the entire long-range (75-year) valuation period, 1995-2069.

Beginning with the 1991 Annual Report, actuarial balances have also been computed based on the intermediate (alternative II) assumptions for valuation periods that are 10 years, 11 years, and continuing through 75 years in length. This series of actuarial balances provides the basis for the test of long-range close actuarial balance, described earlier in this section.

In addition to these actuarial balances, other indicators of the financial condition of the program are shown in this report. One is the series of projected annual balances (that is, the differences between the projected annual income rates and annual cost rates), with particular attention being paid to the level of the annual balances at the end of the long-range period and the time at which the annual balances may change from positive to negative values. Another is the series of projected trust fund ratios, with particular attention being paid to the amount and year of maximum fund ratio accumulation and to the year of exhaustion of the funds. These additional indicators are defined in the introduction to this section.

The estimates are sensitive to changes in the underlying economic and demographic assumptions. The degree of sensitivity, however, varies considerably among the various assumptions. For example, variations in assumed fertility rates have little effect on the estimates for the early years, because almost all of the covered workers and beneficiaries projected for the early years were born prior to the start of the projection period. However, lower fertility rates have large impacts on the actuarial balance in the later years. Variations in economic factors, such as interest rates and increases in wages and prices, have significant effects on the estimates for the short term, as well as for the long term. In general, the degree of confidence that can be placed in the assumptions and estimates is greater for the earlier years than for the later years. Nonetheless, even for the earlier years, the estimates are only an indication of the expected trend

and general range of future program experience. Section II.G contains a more detailed discussion of the effects on the estimates of varying certain economic and demographic assumptions.

a. Annual Income Rates, Cost Rates, and Balances

Table II.F13 presents a comparison of the estimated annual income rates and cost rates by trust fund and alternative. As previously mentioned, the annual income rate excludes net interest income, as well as certain other transfers from the general fund of the Treasury. Detailed long-range projections of trust fund operations, in nominal dollar amounts, are shown in appendix III.B.

The projections for OASDI under the intermediate alternative II assumptions show income rates that increase slowly and steadily due to the combination of the flat payroll tax rate and the gradually increasing effect of the taxation of benefits. The pattern followed by the cost rates is much different. Costs as a percent of taxable payroll are projected to rise slowly for the next 15 years and then to increase rather rapidly for about the next 20 years (through 2030) as the "baby-boom" generation reaches retirement age. Cost rates continue rising slowly through 2036 and then decline slightly for the next 7 years as the "baby-boom" generation ages and the relatively small birth cohorts of the late 1970s reach retirement age. Thereafter, cost rates rise steadily, but slowly, reflecting projected increases in life expectancy. The cost rates during the third 25-year subperiod rise to a level of nearly 19 percent of taxable payroll under the intermediate alternative II assumptions. The income rate during the third 25-year subperiod is just over 13 percent of taxable payroll under alternative II.

Projected income rates under the low cost and high cost sets of assumptions (alternatives I and III, respectively) are very similar to those projected for alternative II as they are largely a reflection of the tax rates specified in the law. OASDI combined cost rates for alternatives I and III differ significantly in size from those projected for alternative II, but follow generally similar patterns. For the low cost alternative I, cost rates decline somewhat for about the first 15 years, and then rise, reaching the current level around 2015 and a peak of 14.24 percent of payroll in 2032. Thereafter, cost rates decline gradually, reaching a level of 13.09 percent of payroll in 2070. For

the high cost alternative III, cost rates rise throughout the 75-year period, but at a relatively faster pace during the next 5 years due to the assumed economic recessions, and between 2010 and 2030 because of the aging of the "baby-boom" generation. During the third 25-year subperiod, the projected cost rate reaches 25 percent of payroll and continues rising.

The projected pattern of the OASDI annual balances (that is, the difference between the income rates and the cost rates) is important in the analysis of the financial condition of the program. Under the alternative II assumptions the annual balances are positive for 18 years (through 2012) and are negative thereafter. This annual deficit rises rapidly reaching 2 percent of taxable payroll by 2020 and continues rising thereafter, to a level of 5.71 percent of taxable payroll for 2070.

Under alternative I, projected OASDI annual balances are positive for over 25 years (through 2020), and thereafter are negative. Deficits under alternative I rise to a peak of 1.28 percent of taxable payroll in 2032, but diminish thereafter, as the effect of the "baby-boom" generation diminishes and the assumed higher fertility rates increase the work force. Deficits under alternative I diminish to 0.05 percent of payroll by 2070. Under the more pessimistic alternative III, however, the OASDI actuarial balance is projected to be positive for only 4 years (through 1998) and to be negative thereafter, reaching deficits of 4 percent of payroll by 2020, 10 percent by 2050, and nearly 15 percent of payroll by 2070.

TABLE II.F13.—COMPARISON OF ESTIMATED INCOME RATES AND COST RATES BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1995-2070

[As a percentage of taxable payroll]

Calendar year	OASI			DI			Combined		
	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
Intermediate:									
1995....	10.69	10.05	0.64	1.89	1.44	0.45	12.58	11.49	1.09
1996....	10.73	10.03	.70	1.89	1.49	.40	12.62	11.52	1.10
1997....	10.91	10.01	.91	1.71	1.54	.17	12.62	11.54	1.08
1998....	10.92	10.01	.90	1.71	1.58	.13	12.63	11.59	1.03
1999....	10.92	10.03	.89	1.71	1.64	.08	12.63	11.66	.97
2000....	10.83	10.05	.78	1.81	1.68	.13	12.64	11.73	.91
2001....	10.83	10.05	.78	1.82	1.73	.09	12.65	11.78	.87
2002....	10.83	10.05	.79	1.82	1.77	.05	12.65	11.82	.83
2003....	10.84	10.05	.79	1.82	1.82	(1)	12.66	11.86	.79
2004....	10.84	10.04	.81	1.82	1.86	−.05	12.66	11.90	.76
2005....	10.85	10.02	.83	1.82	1.90	−.09	12.67	11.92	.75
2010....	10.89	10.21	.68	1.82	2.08	−.26	12.71	12.29	.42
2015....	10.94	11.24	−.30	1.82	2.16	−.34	12.77	13.40	−.63
2020....	11.05	12.76	−1.71	1.83	2.21	−.38	12.88	14.97	−2.09
2025....	11.16	14.11	−2.95	1.83	2.27	−.44	12.99	16.39	−3.40
2030....	11.24	15.01	−3.77	1.83	2.25	−.42	13.08	17.26	−4.19
2035....	11.30	15.37	−4.07	1.84	2.20	−.37	13.13	17.57	−4.44
2040....	11.32	15.27	−3.94	1.84	2.21	−.38	13.16	17.48	−4.32
2045....	11.34	15.16	−3.82	1.84	2.31	−.47	13.18	17.47	−4.29
2050....	11.37	15.28	−3.92	1.84	2.38	−.53	13.21	17.66	−4.45
2055....	11.40	15.66	−4.25	1.84	2.41	−.57	13.25	18.07	−4.82
2060....	11.44	16.09	−4.65	1.84	2.39	−.55	13.28	18.49	−5.20
2065....	11.46	16.41	−4.94	1.85	2.38	−.54	13.31	18.79	−5.48
2070....	11.48	16.64	−5.15	1.85	2.40	−.56	13.33	19.04	−5.71
Low Cost:									
1995....	10.67	9.94	.73	1.89	1.41	.48	12.56	11.35	1.21
1996....	10.72	9.77	.95	1.89	1.41	.48	12.61	11.18	1.43
1997....	10.90	9.62	1.28	1.71	1.42	.29	12.61	11.04	1.58
1998....	10.90	9.49	1.41	1.71	1.42	.29	12.62	10.91	1.70
1999....	10.91	9.38	1.53	1.71	1.43	.28	12.62	10.81	1.81
2000....	10.81	9.28	1.53	1.81	1.44	.37	12.62	10.72	1.90
2001....	10.81	9.20	1.61	1.81	1.45	.36	12.62	10.65	1.98
2002....	10.81	9.12	1.69	1.81	1.46	.35	12.63	10.59	2.04
2003....	10.82	9.05	1.77	1.81	1.48	.34	12.63	10.52	2.11
2004....	10.82	8.97	1.85	1.81	1.50	.32	12.63	10.46	2.17
2005....	10.82	8.92	1.90	1.81	1.52	.30	12.64	10.44	2.20
2010....	10.84	8.97	1.87	1.82	1.59	.23	12.66	10.56	2.10
2015....	10.89	9.85	1.04	1.82	1.62	.20	12.71	11.47	1.24
2020....	10.98	11.09	−.11	1.82	1.62	.20	12.80	12.71	.09
2025....	11.06	12.09	−1.03	1.82	1.65	.18	12.88	13.73	−.85
2030....	11.12	12.59	−1.47	1.82	1.61	.21	12.94	14.20	−1.26
2035....	11.15	12.58	−1.43	1.82	1.56	.26	12.98	14.14	−1.16
2040....	11.16	12.16	−1.00	1.83	1.55	.28	12.99	13.71	−.72
2045....	11.16	11.77	−.61	1.83	1.59	.24	12.99	13.36	−.37
2050....	11.17	11.58	−.41	1.83	1.60	.22	13.00	13.19	−.19
2055....	11.18	11.58	−.40	1.83	1.61	.22	13.01	13.19	−.18
2060....	11.19	11.60	−.40	1.83	1.59	.24	13.02	13.19	−.16
2065....	11.20	11.55	−.34	1.83	1.59	.24	13.03	13.13	−.10
2070....	11.20	11.49	−.28	1.83	1.60	.23	13.04	13.09	−.05

TABLE II.F13.—COMPARISON OF ESTIMATED INCOME RATES AND COST RATES BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1995-2070 (Cont.)

[As a percentage of taxable payroll]

Calendar year	OASI			DI			Combined		
	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
High Cost:									
1995....	10.71	10.12	0.60	1.89	1.48	0.41	12.61	11.60	1.01
1996....	10.74	10.38	.36	1.89	1.60	.29	12.63	11.97	.65
1997....	10.92	10.36	.56	1.71	1.68	.04	12.63	12.04	.59
1998....	10.92	10.43	.50	1.71	1.76	–.05	12.64	12.19	.45
1999....	10.94	10.91	.03	1.72	1.93	–.21	12.66	12.84	–.18
2000....	10.85	11.01	–.17	1.82	2.03	–.21	12.67	13.04	–.38
2001....	10.85	11.04	–.19	1.82	2.11	–.29	12.67	13.15	–.48
2002....	10.86	11.09	–.23	1.82	2.19	–.37	12.68	13.28	–.60
2003....	10.87	11.15	–.29	1.82	2.27	–.45	12.69	13.42	–.74
2004....	10.87	11.22	–.35	1.82	2.35	–.53	12.69	13.57	–.87
2005....	10.88	11.22	–.34	1.82	2.41	–.59	12.71	13.63	–.92
2010....	10.94	11.54	–.60	1.83	2.66	–.83	12.77	14.20	–1.43
2015....	11.02	12.70	–1.68	1.83	2.75	–.91	12.85	15.44	–2.60
2020....	11.15	14.51	–3.36	1.84	2.85	–1.01	12.99	17.36	–4.37
2025....	11.28	16.27	–4.99	1.84	2.98	–1.14	13.12	19.25	–6.13
2030....	11.39	17.71	–6.32	1.85	2.99	–1.15	13.24	20.70	–7.46
2035....	11.48	18.67	–7.19	1.85	2.97	–1.12	13.33	21.64	–8.31
2040....	11.54	19.18	–7.64	1.85	3.04	–1.18	13.39	22.21	–8.82
2045....	11.59	19.67	–8.08	1.86	3.23	–1.38	13.45	22.90	–9.46
2050....	11.65	20.47	–8.82	1.86	3.38	–1.51	13.51	23.84	–10.33
2055....	11.73	21.62	–9.90	1.87	3.48	–1.62	13.59	25.10	–11.51
2060....	11.81	22.92	–11.11	1.87	3.47	–1.60	13.67	26.39	–12.72
2065....	11.88	24.08	–12.20	1.87	3.45	–1.58	13.75	27.53	–13.79
2070....	11.94	25.07	–13.12	1.87	3.47	–1.60	13.81	28.54	–14.73

[1]Negligible, i.e., between –0.005 and 0.005 percent of taxable payroll.

Notes:

1. The income rate excludes interest income and certain transfers from the general fund of the Treasury.
2. Totals do not necessarily equal the sums of rounded components.

Also of interest are the long-range financial conditions of the separate OASI and DI programs. Annual net cash flow under alternative II, as represented by the balances in table II.F13, remains positive for 19 years for the OASI program, but for only 9 years for the DI program.

Figure II.F3 shows in graphical form the patterns of the OASDI annual income rates and cost rates. The income rates are shown only for alternative II in order to simplify the graphical presentation and because, as shown in table II.F13, the variation in the income rates by alternative is very small. The OASDI long-range summarized income rates for alternatives I and III, for the 75-year valuation period, differ by only about 0.3 percent of taxable payroll. By 2070, the annual income rates under alternatives I and III differ by only about 0.8 percent of taxable payroll. Only small fluctuations are projected in the income rate, as the rate of income from taxation of benefits varies only slightly, for each alternative, reflecting changes

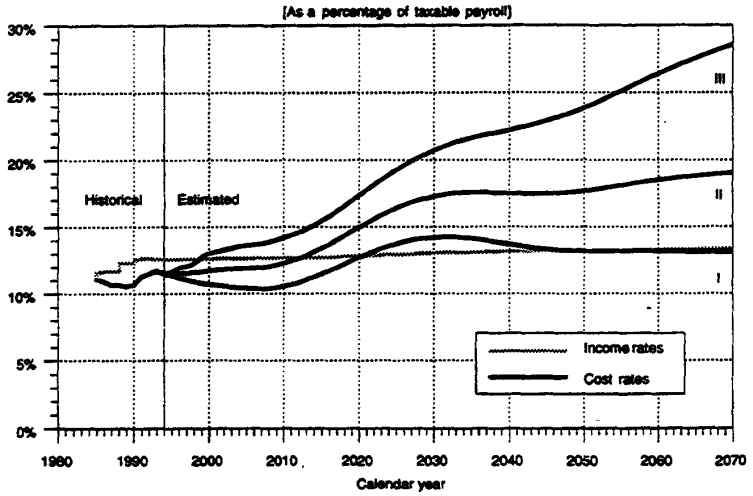
in the cost rate and the fact that benefit-taxation threshold amounts are not indexed.

The patterns of the annual balances are indicated in figure II.F3. For each alternative, the magnitude of each of the positive balances in the early years, as a percent of taxable payroll, is represented by the distance between the appropriate cost-rate curve and the income-rate curve above it. The magnitude of each of the deficits in subsequent years is represented by the distance between the appropriate cost-rate curve and the income-rate curve below it.

In the future, the cost of the OASDI program, as a percent of taxable payroll, will not necessarily be within the range encompassed by alternatives I and III. Nonetheless, because alternatives I and III define a reasonably wide range of economic and demographic conditions, the resulting estimates delineate a reasonable range for future program costs.

FIGURE II.F3.—ESTIMATED OASDI INCOME RATES AND COST RATES BY ALTERNATIVE, CALENDAR YEARS 1985-2070

(As a percentage of taxable payroll)



b. Summarized Income Rates, Cost Rates, and Balances

Summarized values for the full 75-year period are useful in analyzing the long-range financial condition of the program under present law and the long-range financial effects of proposed modifications to the law. In order to focus on the full 75-year period as well as on broad patterns through the period, tables II.F14 and II.F15 summarize, on a present-value basis, the projected annual figures presented in the previous table for various periods within the overall 75-year projection period.

Table II.F14 shows rates on a present-value basis summarized for each of the 25-year subperiods, excluding both the funds on hand at the beginning of the period and the cost of accumulating a target trust fund balance by the end of the period. These rates are useful for comparing the cash flows of tax income and expenditures, as an indicator of the degree to which tax income during the period is sufficient to meet the outgo estimated for the period.

TABLE II.F14.—COMPARISON OF SUMMARIZED INCOME RATES AND COST RATES FOR 25-YEAR SUBPERIODS[1], BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1995-2069

[As a percentage of taxable payroll]

	OASI			DI			Combined		
Subperiod	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
Intermediate:									
1995-2019 . . .	10.87	10.48	0.40	1.81	1.90	−0.09	12.68	12.38	0.31
2020-2044 . . .	11.22	14.70	−3.48	1.83	2.24	−.41	13.06	16.95	−3.89
2045-2069 . . .	11.40	15.83	−4.43	1.84	2.39	−.55	13.25	18.22	−4.98
Low Cost:									
1995-2019 . . .	10.84	9.46	1.38	1.81	1.53	.28	12.64	10.99	1.65
2020-2044 . . .	11.10	12.20	−1.10	1.82	1.60	.22	12.92	13.80	−.88
2045-2069 . . .	11.18	11.62	−.45	1.83	1.60	.23	13.00	13.22	−.22
High Cost:									
1995-2019 . . .	10.91	11.57	−.65	1.82	2.34	−.52	12.73	13.91	−1.18
2020-2044 . . .	11.38	17.63	−6.24	1.85	3.00	−1.16	13.23	20.63	−7.40
2045-2069 . . .	11.74	22.06	−10.32	1.86	3.43	−1.56	13.60	25.49	−11.89

[1]Income rates do not include beginning trust fund balances and cost rates do not include the cost of accumulating target trust fund balances.

Note: Totals do not necessarily equal the sums of rounded components.

Table II.F15 shows summarized rates including the funds on hand at the start of the period and the cost of accumulating a target trust fund balance equal to 100 percent of annual expenditures by the end of the period, for valuation periods of the first 25 years, the first 50

years, and the entire 75-year period. Therefore, the actuarial balance for each of these three valuation periods is equal to the difference between the summarized income rate and cost rate for the corresponding period. A balance of zero for any period on this basis would indicate that estimated outgo for the period could be met, on the average, with a remaining trust fund balance at the end of the period equal to 100 percent of the following year's outgo.

TABLE II.F15.—COMPARISON OF SUMMARIZED INCOME RATES AND COST RATES FOR VALUATION PERIODS[1], BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1995-2069

[As a percentage of taxable payroll]

Valuation period	OASI			DI			Combined		
	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
Intermediate:									
25-years:									
1995-2019	11.59	10.93	0.66	1.85	1.98	−0.13	13.44	12.91	0.54
50-years:									
1995-2044	11.43	12.52	−1.09	1.84	2.08	−.24	13.28	14.61	−1.33
75-years:									
1995-2069	11.43	13.29	−1.87	1.84	2.15	−.31	13.27	15.44	−2.17
Low Cost:									
25-years:									
1995-2019	11.52	9.86	1.67	1.85	1.59	.26	13.37	11.44	1.93
50-years:									
1995-2044	11.34	10.83	.50	1.84	1.58	.25	13.17	12.42	.75
75-years:									
1995-2069	11.30	11.00	.29	1.83	1.58	.25	13.13	12.59	.54
High Cost:									
25-years:									
1995-2019	11.66	12.08	−.43	1.86	2.44	−.58	13.51	14.53	−1.01
50-years:									
1995-2044	11.54	14.49	−2.95	1.85	2.68	−.82	13.39	17.16	−3.77
75-years:									
1995-2069	11.59	16.27	−4.68	1.86	2.85	−.99	13.44	19.11	−5.67

[1]Income rates include beginning trust fund balances and cost rates include the cost of accumulating a target trust fund balance equal to 100 percent of annual expenditures by the end of the period.

Note: Totals do not necessarily equal the sums of rounded components.

The values in table II.F15 show that the combined OASDI program is expected to operate with a positive balance over shorter valuation periods under alternatives I and II. For the first 25-year valuation period the summarized values indicate balances of 1.93 percent of taxable payroll under alternative I, 0.54 percent under alternative II, and −1.01 percent under alternative III. Thus, the program is more than adequately financed for the next 25-year valuation period under all but the high cost alternative III projections. Over the 50-year valuation period, 1995-2044, the OASDI program would have a positive balance of 0.75 percent under alternative I, but would have deficits of 1.33 percent under alternative II and 3.77 percent under

alternative III. Thus, the program is more than adequately financed for the next 50-year valuation period under only the low cost set of assumptions, alternative I.

For the entire 75-year valuation period, the combined OASDI program would again have actuarial deficits except for the low cost set of assumptions, alternative I. The actuarial balance for this long-range valuation period is projected to be 0.54 percent of taxable payroll under alternative I, –2.17 percent under alternative II, and –5.67 percent under alternative III.

As may be concluded from tables II.F14 and II.F15, the financial condition of the DI program is somewhat poorer than that of the OASI program for the first 25 years. Summarized over the full 75-year period, however, long-range deficits for the OASI and DI programs under intermediate assumptions are about the same relative to program costs.

c. Test of Long-Range Close Actuarial Balance

Two tests of the financial status of the OASI, DI, and combined OASDI programs are presented in this report. The test of long-range close actuarial balance incorporates a graduated tolerance scale which allows larger actuarial deficits for longer valuation periods, reflecting the greater uncertainty inherent in the estimates for later years. The other test, the short-range test of the financial adequacy of the program, was discussed earlier in this section.

Table II.F16 presents a comparison of the estimated actuarial balances with the minimum allowable balance (or maximum allowable deficit) under the long-range test, each expressed as a percentage of the summarized cost rate, based on the intermediate alternative II estimates. Values are shown for only 14 of the valuation periods: those of length 10 years, 15 years, and continuing in 5-year increments through 75 years. However, each of the 66 periods—those of length 10 years, 11 years, and continuing in 1-year increments through 75 years—is considered for the test. These minimum allowable balances are calculated to show the limit for each valuation period resulting from the graduated tolerance scale. The patterns in the estimated balances as a percentage of the summarized cost rates, as well as that for the minimum allowable balance, are presented graphically in figure II.F4, for the OASI, DI and combined OASDI

programs. Values shown for the 25-year, 50-year, and 75-year valuation periods correspond to those presented in table II.F15.

As discussed earlier, a program is found not to be in long-range close actuarial balance if, for any of the valuation periods ending with the 10th through 75th years of the projection period, the estimated actuarial balance is less than the minimum allowable balance. The minimum allowable balance as a percentage of the summarized cost rate is –5.0 percent for the full 75-year long-range period and is reduced uniformly for shorter valuation periods, reaching zero for the 10-year valuation period.

For the OASI program, the estimated actuarial balance as a percentage of the summarized cost rate exceeds the minimum allowable for valuation periods of length 10 years through 35 years, under the intermediate alternative II estimates. For valuation periods of length greater than 35 years, the estimated actuarial balance is less than the minimum allowable. For the full 75-year long-range period the estimated actuarial balance reaches –14.04 percent of the summarized cost rate, for a shortfall of over 9 percent, from the minimum allowable balance of –5.0 percent of the summarized cost rate. Thus, although the OASI program satisfies the short-range test of financial adequacy (as discussed earlier in this section), it is not in long-range close actuarial balance.

For the DI program, the estimated actuarial balance as a percentage of the summarized cost rate exceeds the minimum allowable balance for valuation periods of length 10 through 14 years under the intermediate alternative II estimates. For valuation periods of length greater than 14 years, the estimated actuarial balance is less than the minimum allowable. The shortfall from the minimum allowable balance rises to a level of 14.33 percent of the summarized cost rate for the full long-range period, for a shortfall of over 9 percent, from the minimum allowable balance of -5.0 percent of the summarized cost rate. Thus, although the DI program satisfies the short-range test of financial adequacy (as discussed earlier in this section), it is also not in long-range close actuarial balance.

As indicated above, financing for the DI program is less adequate than for the OASI program during the first 25 years even though long-range actuarial deficits are comparable over the entire 75-year period. This occurs because the cost of the OASI program rises much

faster during the long-range period. As a result, tax rates that are relatively more adequate for the OASI program during the first 25 years, become relatively less adequate thereafter.

For the combined OASDI program, the estimated actuarial balance as a percentage of the summarized cost rate exceeds the minimum allowable balance for valuation periods of length 10 years through 33 years. For valuation periods of length greater than 33 years, the estimated actuarial balance is below the minimum allowable balance. The size of the shortfall from the minimum allowable balance rises gradually reaching 9.08 percent of the summarized cost rate for the full 75-year long-range valuation period. Thus, although the OASDI program satisfies the short-range test of financial adequacy (as discussed earlier in this section), it is out of long-range close actuarial balance.

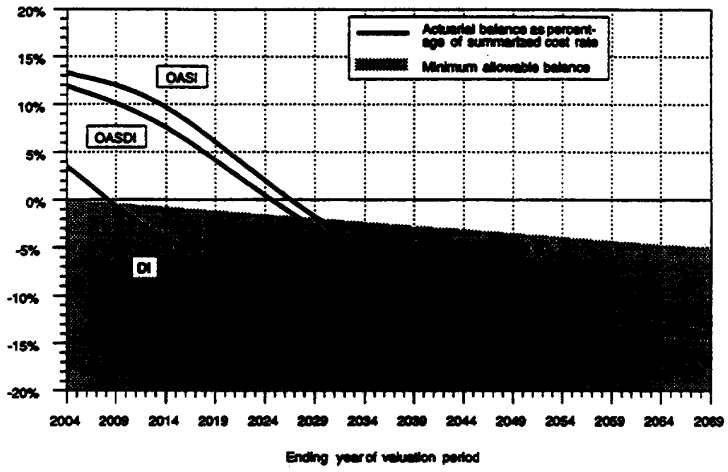
The OASI and DI programs, both separate and combined, were also found to be out of close actuarial balance in the 1994 Annual Report. The estimated deficits for the combined OASDI program in this report are similar to those shown in the 1994 report. However, for the OASI and DI programs, considered separately, the size of the estimated deficits, and therefore the degree to which each program is found to be out of close actuarial balance, is changed significantly by enactment of tax rate reallocation since the 1994 report. Due to this reallocation, which was needed to assure solvency of the DI program through the short-range period, the estimated long-range deficits were reduced for DI and increased for OASI.

TABLE II.F16.—COMPARISON OF ESTIMATED LONG-RANGE ACTUARIAL BALANCES WITH THE MINIMUM ALLOWABLE FOR THE TEST FOR CLOSE ACTUARIAL BALANCE BY TRUST FUND, BASED ON INTERMEDIATE ESTIMATES

Valuation period	Rates (percentage of taxable payroll)			Balance as a percentage of cost rate	
	Summarized income rate	Summarized cost rate	Balance	Balance	Minimum allowable balance
OASI:					
10 years: 1995-2004 . . .	12.46	10.99	1.46	13.32	0.00
15 years: 1995-2009 . . .	11.97	10.69	1.28	11.99	–.38
20 years: 1995-2014 . . .	11.72	10.69	1.04	9.69	–.77
25 years: 1995-2019 . . .	11.59	10.93	.66	6.08	–1.15
30 years: 1995-2024 . . .	11.52	11.29	.23	2.01	–1.54
35 years: 1995-2029 . . .	11.48	11.68	–.20	–1.74	–1.92
40 years: 1995-2034 . . .	11.46	12.03	–.58	–4.80	–2.31
45 years: 1995-2039 . . .	11.44	12.31	–.87	–7.06	–2.69
50 years: 1995-2044 . . .	11.43	12.52	–1.09	–8.70	–3.08
55 years: 1995-2049 . . .	11.43	12.69	–1.27	–9.97	–3.46
60 years: 1995-2054 . . .	11.42	12.85	–1.43	–11.10	–3.85
65 years: 1995-2059 . . .	11.42	13.01	–1.58	–12.17	–4.23
70 years: 1995-2064 . . .	11.42	13.15	–1.73	–13.15	–4.62
75 years: 1995-2069 . . .	11.43	13.29	–1.87	–14.04	–5.00
DI:					
10 years: 1995-2004 . . .	1.89	1.83	.06	3.48	.00
15 years: 1995-2009 . . .	1.87	1.88	–.01	–.69	–.38
20 years: 1995-2014 . . .	1.86	1.94	–.08	–4.08	–.77
25 years: 1995-2019 . . .	1.85	1.98	–.13	–6.41	–1.15
30 years: 1995-2024 . . .	1.85	2.01	–.17	–8.23	–1.54
35 years: 1995-2029 . . .	1.85	2.04	–.20	–9.63	–1.92
40 years: 1995-2034 . . .	1.84	2.06	–.21	–10.37	–2.31
45 years: 1995-2039 . . .	1.84	2.07	–.23	–10.90	–2.69
50 years: 1995-2044 . . .	1.84	2.08	–.24	–11.52	–3.08
55 years: 1995-2049 . . .	1.84	2.10	–.26	–12.23	–3.46
60 years: 1995-2054 . . .	1.84	2.12	–.27	–12.92	–3.85
65 years: 1995-2059 . . .	1.84	2.13	–.29	–13.50	–4.23
70 years: 1995-2064 . . .	1.84	2.14	–.30	–13.94	–4.62
75 years: 1995-2069 . . .	1.84	2.15	–.31	–14.33	–5.00
OASDI:					
10 years: 1995-2004 . . .	14.35	12.82	1.53	11.91	.00
15 years: 1995-2009 . . .	13.84	12.57	1.27	10.09	–.38
20 years: 1995-2014 . . .	13.58	12.62	.96	7.58	–.77
25 years: 1995-2019 . . .	13.44	12.91	.54	4.16	–1.15
30 years: 1995-2024 . . .	13.37	13.31	.06	.46	–1.54
35 years: 1995-2029 . . .	13.33	13.73	–.40	–2.91	–1.92
40 years: 1995-2034 . . .	13.30	14.09	–.79	–5.62	–2.31
45 years: 1995-2039 . . .	13.29	14.38	–1.10	–7.61	–2.69
50 years: 1995-2044 . . .	13.28	14.61	–1.33	–9.10	–3.08
55 years: 1995-2049 . . .	13.27	14.79	–1.52	–10.30	–3.46
60 years: 1995-2054 . . .	13.27	14.97	–1.70	–11.36	–3.85
65 years: 1995-2059 . . .	13.27	15.14	–1.87	–12.35	–4.23
70 years: 1995-2064 . . .	13.27	15.30	–2.03	–13.26	–4.62
75 years: 1995-2069 . . .	13.27	15.44	–2.17	–14.08	–5.00

Note: Totals do not necessarily equal the sums of rounded components.

FIGURE II.F4.—COMPARISON OF ESTIMATED LONG-RANGE ACTUARIAL BALANCES WITH THE MINIMUM ALLOWABLE FOR CLOSE ACTUARIAL BALANCE, ALTERNATIVE II BY TRUST FUND



d. Income and Cost Rates by Component

Annual income rates and their components are shown in table II.F17, for each alternative set of assumptions. The annual income rates reflect the scheduled payroll tax rates and the projected rates of income from the taxation of benefits, which reflect changes in the cost rates and the fact that benefit-taxation threshold amounts are not indexed.

Summarized values for the annual income and cost rates, along with their components, are presented in table II.F18 for 25-year, 50-year, and 75-year valuation periods. Summarized income rates include the starting trust fund balance in addition to the components included in the annual income rates. The summarized cost rates include the cost of reaching and maintaining an ending trust fund target of 100 percent of annual expenditures by the end of the period in addition to the expenditures included in the annual cost rates. Thus, the total summarized rates shown in table II.F18 are the same as the summarized income and cost rates shown in table II.F15 for the 25-year, 50-year, and 75-year valuation periods.

It may be noted that the payroll tax income expressed as a percentage

of taxable payroll is slightly smaller than the actual tax rates in effect for each period. This results from the fact that all OASDI income and outgo amounts presented in this report are computed on a cash basis, i.e., amounts are attributed to the year in which they are actually received by, or expended from, the fund, while taxable payroll is allocated to the year in which earnings are paid. Because earnings are paid to workers before the corresponding payroll taxes are credited to the funds, payroll tax income for a particular year reflects a combination of the taxable payrolls from that year and from prior years, when payroll was smaller. Dividing payroll tax income by taxable payroll for a particular year, or period of years, will thus generally result in an income rate that is slightly less than the applicable tax rate for the period.

TABLE II.F17.—COMPONENTS OF ANNUAL INCOME RATES BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1995-2070

[As a percentage of taxable payroll]

	OASI			DI			Combined		
Calendar year	Payroll tax	Taxation of benefits	Total	Payroll tax	Taxation of benefits	Total	Payroll tax	Taxation of benefits	Total
Intermediate:									
1995	10.52	0.17	10.69	1.88	0.01	1.89	12.40	0.18	12.58
1996	10.52	.21	10.73	1.88	.01	1.89	12.40	.22	12.62
1997	10.70	.21	10.91	1.70	.01	1.71	12.40	.22	12.62
1998	10.70	.22	10.92	1.70	.01	1.71	12.40	.23	12.63
1999	10.70	.22	10.92	1.70	.01	1.71	12.40	.23	12.63
2000	10.60	.23	10.83	1.80	.01	1.81	12.40	.24	12.64
2001	10.60	.23	10.83	1.80	.02	1.82	12.40	.25	12.65
2002	10.60	.23	10.83	1.80	.02	1.82	12.40	.25	12.65
2003	10.60	.24	10.84	1.80	.02	1.82	12.40	.26	12.66
2004	10.60	.24	10.84	1.80	.02	1.82	12.40	.26	12.66
2005	10.60	.25	10.85	1.80	.02	1.82	12.40	.27	12.67
2010	10.60	.29	10.89	1.80	.02	1.82	12.40	.31	12.71
2015	10.60	.34	10.94	1.80	.02	1.82	12.40	.37	12.77
2020	10.60	.45	11.05	1.80	.03	1.83	12.40	.48	12.88
2025	10.60	.56	11.16	1.80	.03	1.83	12.40	.59	12.99
2030	10.60	.64	11.24	1.80	.03	1.83	12.40	.68	13.08
2035	10.60	.70	11.30	1.80	.04	1.84	12.40	.73	13.13
2040	10.60	.72	11.32	1.80	.04	1.84	12.40	.76	13.16
2045	10.60	.74	11.34	1.80	.04	1.84	12.40	.78	13.18
2050	10.60	.77	11.37	1.80	.04	1.84	12.40	.81	13.21
2055	10.60	.80	11.40	1.80	.04	1.84	12.40	.85	13.25
2060	10.60	.84	11.44	1.80	.04	1.84	12.40	.88	13.28
2065	10.60	.86	11.46	1.80	.05	1.85	12.40	.91	13.31
2070	10.60	.88	11.48	1.80	.05	1.85	12.40	.93	13.33

TABLE II.F17.—COMPONENTS OF ANNUAL INCOME RATES BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1995-2070 (Cont.)

[As a percentage of taxable payroll]

	OASI			DI			Combined		
Calendar year	Payroll tax	Taxation of benefits	Total	Payroll tax	Taxation of benefits	Total	Payroll tax	Taxation of benefits	Total
Low Cost:									
1995	10.52	0.15	10.67	1.88	0.01	1.89	12.40	0.16	12.56
1996	10.52	.20	10.72	1.88	.01	1.89	12.40	.21	12.61
1997	10.70	.20	10.90	1.70	.01	1.71	12.40	.21	12.61
1998	10.70	.20	10.90	1.70	.01	1.71	12.40	.22	12.62
1999	10.70	.21	10.91	1.70	.01	1.71	12.40	.22	12.62
2000	10.60	.21	10.81	1.80	.01	1.81	12.40	.22	12.62
2001	10.60	.21	10.81	1.80	.01	1.81	12.40	.22	12.62
2002	10.60	.21	10.81	1.80	.01	1.81	12.40	.23	12.63
2003	10.60	.22	10.82	1.80	.01	1.81	12.40	.23	12.63
2004	10.60	.22	10.82	1.80	.01	1.81	12.40	.23	12.63
2005	10.60	.22	10.82	1.80	.01	1.81	12.40	.24	12.64
2010	10.60	.24	10.84	1.80	.02	1.82	12.40	.26	12.66
2015	10.60	.29	10.89	1.80	.02	1.82	12.40	.31	12.71
2020	10.60	.38	10.98	1.80	.02	1.82	12.40	.40	12.80
2025	10.60	.46	11.06	1.80	.02	1.82	12.40	.48	12.88
2030	10.60	.52	11.12	1.80	.02	1.82	12.40	.54	12.94
2035	10.60	.55	11.15	1.80	.02	1.82	12.40	.58	12.98
2040	10.60	.56	11.16	1.80	.03	1.83	12.40	.59	12.99
2045	10.60	.56	11.16	1.80	.03	1.83	12.40	.59	12.99
2050	10.60	.57	11.17	1.80	.03	1.83	12.40	.60	13.00
2055	10.60	.58	11.18	1.80	.03	1.83	12.40	.61	13.01
2060	10.60	.59	11.19	1.80	.03	1.83	12.40	.62	13.02
2065	10.60	.60	11.20	1.80	.03	1.83	12.40	.63	13.03
2070	10.60	.60	11.20	1.80	.03	1.83	12.40	.64	13.04
High Cost:									
1995	10.52	.19	10.71	1.88	.01	1.89	12.40	.21	12.61
1996	10.52	.22	10.74	1.88	.01	1.89	12.40	.23	12.63
1997	10.70	.22	10.92	1.70	.01	1.71	12.40	.23	12.63
1998	10.70	.22	10.92	1.70	.01	1.71	12.40	.24	12.64
1999	10.70	.24	10.94	1.70	.02	1.72	12.40	.26	12.66
2000	10.60	.25	10.85	1.80	.02	1.82	12.40	.27	12.67
2001	10.60	.25	10.85	1.80	.02	1.82	12.40	.27	12.67
2002	10.60	.26	10.86	1.80	.02	1.82	12.40	.28	12.68
2003	10.60	.27	10.87	1.80	.02	1.82	12.40	.29	12.69
2004	10.60	.27	10.87	1.80	.02	1.82	12.40	.29	12.69
2005	10.60	.28	10.88	1.80	.02	1.82	12.40	.31	12.71
2010	10.60	.34	10.94	1.80	.03	1.83	12.40	.37	12.77
2015	10.60	.42	11.02	1.80	.03	1.83	12.40	.45	12.85
2020	10.60	.55	11.15	1.80	.04	1.84	12.40	.59	12.99
2025	10.60	.68	11.28	1.80	.04	1.84	12.40	.72	13.12
2030	10.60	.79	11.39	1.80	.05	1.85	12.40	.84	13.24
2035	10.60	.88	11.48	1.80	.05	1.85	12.40	.93	13.33
2040	10.60	.94	11.54	1.80	.05	1.85	12.40	.99	13.39
2045	10.60	.99	11.59	1.80	.06	1.86	12.40	1.05	13.45
2050	10.60	1.05	11.65	1.80	.06	1.86	12.40	1.11	13.51
2055	10.60	1.13	11.73	1.80	.07	1.87	12.40	1.19	13.59
2060	10.60	1.21	11.81	1.80	.07	1.87	12.40	1.27	13.67
2065	10.60	1.28	11.88	1.80	.07	1.87	12.40	1.35	13.75
2070	10.60	1.34	11.94	1.80	.07	1.87	12.40	1.41	13.81

Note: Totals do not necessarily equal the sums of rounded components.

TABLE II.F18.—COMPONENTS OF SUMMARIZED INCOME RATES AND COST RATES BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1995-2069

[As a percentage of taxable payroll]

Valuation period	Income rate				Cost rate		
	Payroll tax	Taxation of benefits	Beginning fund balance	Total	Disbursements	Ending fund target	Total
OASI:							
Intermediate:							
1995-2019	10.60	0.27	0.72	11.59	10.48	0.45	10.93
1995-2044	10.60	.43	.41	11.43	12.29	.23	12.52
1995-2069	10.59	.52	.31	11.43	13.15	.14	13.29
Low Cost:							
1995-2019	10.60	.24	.68	11.52	9.46	.39	9.86
1995-2044	10.59	.36	.39	11.34	10.65	.19	10.83
1995-2069	10.59	.41	.29	11.30	10.90	.11	11.00
High Cost:							
1995-2019	10.60	.31	.74	11.66	11.57	.52	12.08
1995-2044	10.59	.52	.42	11.54	14.19	.30	14.49
1995-2069	10.59	.67	.32	11.59	16.06	.20	16.27
DI:							
Intermediate:							
1995-2019	1.79	.02	.04	1.85	1.90	.08	1.98
1995-2044	1.80	.03	.02	1.84	2.05	.04	2.08
1995-2069	1.80	.03	.02	1.84	2.13	.02	2.15
Low Cost:							
1995-2019	1.79	.01	.04	1.85	1.53	.06	1.59
1995-2044	1.80	.02	.02	1.84	1.56	.03	1.58
1995-2069	1.80	.02	.02	1.83	1.57	.01	1.58
High Cost:							
1995-2019	1.79	.02	.04	1.86	2.34	.10	2.44
1995-2044	1.80	.03	.02	1.85	2.63	.05	2.68
1995-2069	1.80	.04	.02	1.86	2.82	.03	2.85
OASDI:							
Intermediate:							
1995-2019	12.39	.29	.76	13.44	12.38	.53	12.91
1995-2044	12.39	.45	.43	13.28	14.34	.27	14.61
1995-2069	12.39	.55	.33	13.27	15.28	.16	15.44
Low Cost:							
1995-2019	12.39	.25	.72	13.37	10.99	.45	11.44
1995-2044	12.39	.37	.41	13.17	12.21	.21	12.42
1995-2069	12.39	.44	.30	13.13	12.47	.12	12.59
High Cost:							
1995-2019	12.39	.34	.78	13.51	13.91	.62	14.53
1995-2044	12.39	.56	.45	13.39	16.81	.35	17.16
1995-2069	12.39	.71	.34	13.44	18.88	.23	19.11

Note: Totals do not necessarily equal the sums of rounded components.

e. Comparison of Workers to Beneficiaries

The primary reason that the estimated OASDI cost rate increases rapidly after 2010 is that the number of beneficiaries is projected to increase more rapidly than the number of covered workers. This occurs because the relatively large number of persons born during the period of high fertility rates from the end of World War II through the mid-1960s will reach retirement age, and begin to receive benefits, while the relatively small number of persons born during the subsequent period of low fertility rates will comprise the labor force.

Actuarial Analysis

A comparison of the numbers of covered workers and beneficiaries is shown in table II.F19.

TABLE II.F19.—COMPARISON OF OASDI COVERED WORKERS AND BENEFICIARIES BY ALTERNATIVE, CALENDAR YEARS 1945-2070

Calendar year	Covered workers[1] (in thousands)	Beneficiaries[2] (in thousands)			Covered workers per OASDI beneficiary	Beneficiaries per 100 covered workers
		OASI	DI	OASDI		
Historical data:						
1945	46,390	1,106	—	1,106	41.9	2
1950	48,280	2,930	—	2,930	16.5	6
1955	65,200	7,563	—	7,563	8.6	12
1960	72,530	13,740	522	14,262	5.1	20
1965	80,680	18,509	1,648	20,158	4.0	25
1970	93,090	22,618	2,568	25,186	3.7	27
1975	100,200	26,998	4,125	31,123	3.2	31
1980	112,212	30,385	4,734	35,119	3.2	31
1985	119,481	32,776	3,874	36,650	3.3	31
1986	121,962	33,349	3,972	37,321	3.3	31
1987	125,028	33,918	4,035	37,953	3.3	30
1988	129,121	34,343	4,077	38,420	3.4	30
1989	131,687	34,754	4,105	38,859	3.4	30
1990	132,548	35,266	4,204	39,470	3.4	30
1991	131,861	35,785	4,388	40,172	3.3	30
1992	[3]132,700	36,314	4,716	41,029	3.2	31
1993	[3]134,800	36,758	5,083	41,840	3.2	31
1994	[3]138,786	37,082	5,435	42,517	3.3	31
Intermediate:						
1995	141,209	37,449	5,769	43,219	3.3	31
2000	147,600	39,135	7,296	46,430	3.2	31
2005	153,468	41,040	8,787	49,827	3.1	32
2010	158,485	44,307	10,058	54,366	2.9	34
2015	161,349	50,010	10,643	60,653	2.7	38
2020	162,588	57,253	10,885	68,137	2.4	42
2025	163,591	64,153	11,251	75,405	2.2	46
2030	164,988	69,566	11,286	80,852	2.0	49
2035	166,944	72,882	11,211	84,093	2.0	50
2040	168,846	73,899	11,353	85,252	2.0	50
2045	170,179	74,521	11,864	86,384	2.0	51
2050	171,110	75,743	12,198	87,940	1.9	51
2055	171,806	77,904	12,439	90,343	1.9	53
2060	172,516	80,299	12,435	92,734	1.9	54
2065	173,296	82,238	12,466	94,704	1.8	55
2070	174,011	83,806	12,614	96,420	1.8	55
Low Cost:						
1995	141,777	37,440	5,731	43,171	3.3	30
2000	151,191	38,937	6,736	45,673	3.3	30
2005	158,196	40,577	7,877	48,454	3.3	31
2010	164,201	43,581	8,558	52,139	3.1	32
2015	167,801	49,009	8,794	57,803	2.9	34
2020	170,634	55,914	8,855	64,769	2.6	38
2025	173,843	62,442	9,095	71,538	2.4	41
2030	178,077	67,330	9,135	76,465	2.3	43
2035	183,451	70,069	9,123	79,192	2.3	43
2040	189,255	70,580	9,300	79,880	2.4	42
2045	194,937	70,893	9,782	80,675	2.4	41
2050	200,648	71,906	10,167	82,073	2.4	41
2055	206,638	73,948	10,525	84,474	2.4	41
2060	213,037	76,265	10,757	87,022	2.4	41
2065	219,743	78,364	11,074	89,439	2.5	41
2070	226,523	80,465	11,493	91,958	2.5	41

TABLE II.F19.—COMPARISON OF OASDI COVERED WORKERS AND BENEFICIARIES BY ALTERNATIVE, CALENDAR YEARS 1945-2070 (Cont.)

Calendar year	Covered workers[1] (in thousands)	Beneficiaries[2] (in thousands)			Covered workers per OASDI beneficiary	Beneficiaries per 100 covered workers
		OASI	DI	OASDI		
High Cost:						
1995	140,776	37,459	5,815	43,275	3.3	31
2000	141,947	39,338	8,060	47,399	3.0	33
2005	148,430	41,569	9,679	51,247	2.9	35
2010	152,605	45,095	11,537	56,632	2.7	37
2015	155,043	51,051	12,483	63,534	2.4	41
2020	155,079	58,643	12,916	71,559	2.2	46
2025	154,284	65,997	13,417	79,414	1.9	51
2030	153,411	72,140	13,459	85,600	1.8	56
2035	152,826	76,388	13,331	89,719	1.7	59
2040	151,281	78,371	13,441	91,812	1.6	61
2045	149,133	79,804	13,970	93,774	1.6	63
2050	146,355	81,744	14,218	95,962	1.5	66
2055	143,072	84,503	14,284	98,788	1.4	69
2060	139,668	87,419	13,951	101,369	1.4	73
2065	136,315	89,606	13,577	103,183	1.3	76
2070	133,047	91,016	13,347	104,363	1.3	78

[1]Workers who are paid at some time during the year for employment on which OASDI taxes are due.

[2]Beneficiaries with monthly benefits in current-payment status as of June 30.

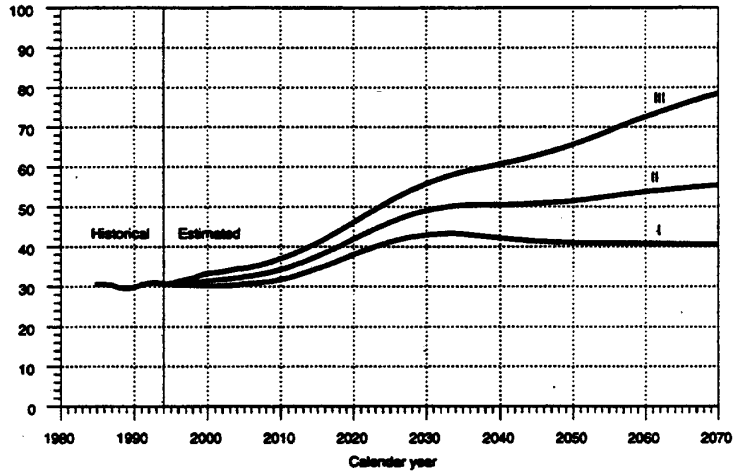
[3]Preliminary.

Note: The numbers of beneficiaries do not include certain uninsured persons, most of whom both attained age 72 before 1968 and have fewer than 3 quarters of coverage, in which cases the costs are reimbursed by the general fund of the Treasury. The number of such uninsured persons was 1,924 as of June 30, 1994, and is estimated to be fewer than 500 by the turn of the century. Totals do not necessarily equal the sums of rounded components.

Table II.F19 shows that the number of covered workers per beneficiary, which was about 3.3 in 1994, is estimated to decline in the future. Based on alternative I, for which high fertility rates and small reductions in death rates are assumed, the ratio declines to a level of 2.3 by 2030, and increases slowly thereafter. Based on alternative III, for which low fertility rates and substantial reductions in death rates are assumed, the decline is much greater, reaching 1.3 workers per beneficiary by 2065. Based on alternative II, the ratio declines to 1.8 workers per beneficiary by 2065.

The impact of the demographic shifts under the three alternatives on the OASDI cost rates is better understood by considering the projected number of beneficiaries per 100 workers. As compared to the 1994 level of 31 beneficiaries per 100 covered workers, this ratio is estimated to rise by the year 2070 to significantly higher levels, which are 41 under alternative I, 55 under alternative II, and 78 under alternative III. The significance of these numbers can be seen by comparing figure II.F3 to figure II.F5.

FIGURE II.F5.—RATIOS OF ESTIMATED OASDI BENEFICIARIES PER 100 COVERED WORKERS BY ALTERNATIVE, CALENDAR YEARS 1985-2070



For each alternative, the shape of the curve in figure II.F5, which shows beneficiaries per 100 covered workers, is strikingly similar to that of the corresponding cost-rate curve in figure II.F3, thereby emphasizing the extent to which the cost of the OASDI program is determined by the age patterns of the population. Because the cost rate is basically the product of the number of beneficiaries and their average benefit, divided by the product of the number of covered workers and their average taxable earnings (and because average benefits rise at about the same rate as average earnings), it is to be expected that the pattern of the annual cost rates is similar to that of the annual ratios of beneficiaries to workers. A graphical presentation of covered workers per beneficiary is shown in section I.H of the Overview.

f. Trust Fund Ratios

Table II.F20 shows, by alternative, the estimated trust fund ratios (without regard to advance tax transfers that would be effected after the end of the 10-year, short-range period) for the separate and combined OASI and DI Trust Funds. Also shown in this table is the

first year in which a fund is estimated to be exhausted, reflecting the effect of the provision for advance tax transfers. The patterns of the combined fund ratios, over the 75-year period, are shown graphically in figure II.F6, for all three sets of assumptions.

Based on alternative II, the OASI trust fund ratio rises steadily from 139 percent at the beginning of 1995, reaching a peak of 311 percent at the beginning of 2012. This increase in the OASI trust fund ratio results from the fact that the annual income rate (excluding interest) exceeds annual outgo for several years (see table II.F13). Thereafter, the OASI ratio declines steadily, with the OASI Trust Fund becoming exhausted in 2031. The DI trust fund ratio follows a similar pattern, except that it unfolds more rapidly. The DI trust fund ratio is estimated to rise from 54 percent at the beginning of 1995 to a peak of 142 percent in 2003, and to decline thereafter until becoming exhausted in 2016.

The trust fund ratio for the hypothetical combined OASI and DI Trust Funds rises from 128 percent for 1995 to a peak of 269 percent at the beginning of 2011. Thereafter, the ratio declines, with the combined funds becoming exhausted in 2030. Based on the intermediate estimates in last year's report, the peak fund ratio for the combined funds was estimated to be 241 percent and the year of exhaustion was estimated to be 2029.

The trust fund ratio for the combined OASDI program begins to decline in 2012, the year before annual expenditures begin to exceed noninterest income. (For 2012, the very small excess of noninterest income over outgo is not enough to allow the combined trust funds to increase as rapidly as outgo; as a result the trust fund ratio begins to fall.) Although the dollar amount of assets will continue to rise through the beginning of 2019, because interest income more than offsets the shortfall in noninterest income, revenue from the general fund of the Treasury will be needed in increasingly large amounts, beginning in 2013, to redeem the trust funds' public-debt obligations due to the cash-flow shortfall. This will differ from the experience of recent years when the trust funds have been net lenders to the general fund. The change in the cash flow between the trust funds and the general fund is expected to have important public policy and economic implications that go well beyond the operation of the OASDI

program itself. Discussion of these issues is outside the scope of this report.

Based on the low cost alternative I assumptions, the trust fund ratio for the DI program increases throughout the long-range projection period, reaching extremely high levels by 2070, of 1,762 percent. For the OASI program, the trust fund ratio rises to a peak of 534 percent in 2017, dropping thereafter to a stable level around 370 percent by 2045. For the combined OASDI program, trust fund ratios follow a pattern similar to that for OASI, peaking at 530 percent in 2018, and then falling, but with a gradual increase, starting around 2040, to a level of 542 percent for 2070.

In contrast, under alternative III, the OASI trust fund ratio is estimated to peak at 170 percent in 2003, thereafter declining to fund exhaustion by the end of 2020. The DI Trust Fund is estimated to begin declining in 1998, becoming depleted in 2004. The combined trust fund ratio is estimated to rise to a peak of 153 percent in 2000, declining thereafter to fund exhaustion by the end of 2016.

The fact that the financing for the DI program is relatively more adequate compared to the financing for the OASI program under low cost assumptions, but relatively less adequate under high cost assumptions is due to the tax rate reallocation enacted since the last report. This reallocation roughly equalized the size of the long-range actuarial deficits of the OASI and DI programs in relation to the summarized cost rates under intermediate assumptions. A smaller reallocation would have been needed to equalize the deficits in this manner under low cost alternative I assumptions, while a larger reallocation would have been needed under high cost alternative III assumptions.

Thus, because of the high ultimate cost rates that are projected under all but the most optimistic assumptions, income will eventually need to be increased and/or program costs will need to be reduced in order to prevent the trust funds from becoming exhausted.

Even under the high cost assumptions, however, the combined OASI and DI funds on hand plus their estimated future income would be able to cover their combined expenditures for over 20 years into the future (until 2017). Under the alternative II assumptions the combined starting funds plus estimated future income would be able to cover expenditures for about 35 years into the future (until 2030).

The program would be able to cover expenditures for the indefinite future under the more optimistic assumptions in alternative I. In the 1994 report, the combined trust funds were projected to be exhausted in 2014 under alternative III and in 2029 under alternative II.

TABLE II.F20.—ESTIMATED TRUST FUND RATIOS BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1995-2070

[In percent]

	Intermediate			Low Cost			High Cost		
Calendar year	OASI	DI	Combined	OASI	DI	Combined	OASI	DI	Combined
1995	139	54	128	139	55	129	139	53	128
1996	149	82	140	151	88	143	147	76	138
1997	160	108	153	166	122	160	154	92	145
1998	174	119	166	184	145	179	160	91	150
1999	187	126	179	205	166	200	165	85	153
2000	200	130	190	226	187	221	168	73	153
2001	212	137	201	249	214	244	169	61	152
2002	224	141	211	273	241	269	170	47	150
2003	235	142	221	299	265	294	170	30	147
2004	246	140	230	325	287	320	170	11	143
2005	258	136	238	351	308	345	170	(1)	138
2010	304	91	268	473	391	461	156	(1)	100
2015	303	20	257	531	466	522	107	(1)	35
2020	247	(1)	201	523	551	527	17	(1)	(1)
2025	156	(1)	113	486	631	503	(1)	(1)	(1)
2030	43	(1)	3	439	732	472	(1)	(1)	(1)
2035	(1)	(1)	(1)	399	865	450	(1)	(1)	(1)
2040	(1)	(1)	(1)	377	998	447	(1)	(1)	(1)
2045	(1)	(1)	(1)	371	1,099	457	(1)	(1)	(1)
2050	(1)	(1)	(1)	371	1,210	473	(1)	(1)	(1)
2055	(1)	(1)	(1)	370	1,329	487	(1)	(1)	(1)
2060	(1)	(1)	(1)	368	1,478	502	(1)	(1)	(1)
2065	(1)	(1)	(1)	368	1,626	520	(1)	(1)	(1)
2070	(1)	(1)	(1)	372	1,762	542	(1)	(1)	(1)
Trust fund is estimated to be exhausted in:	2031	2016	2030	(2)	(2)	(2)	2020	2004	2016

[1]The trust fund is estimated to have been exhausted by the beginning of this year. The last line of the table shows the specific year of trust fund exhaustion.

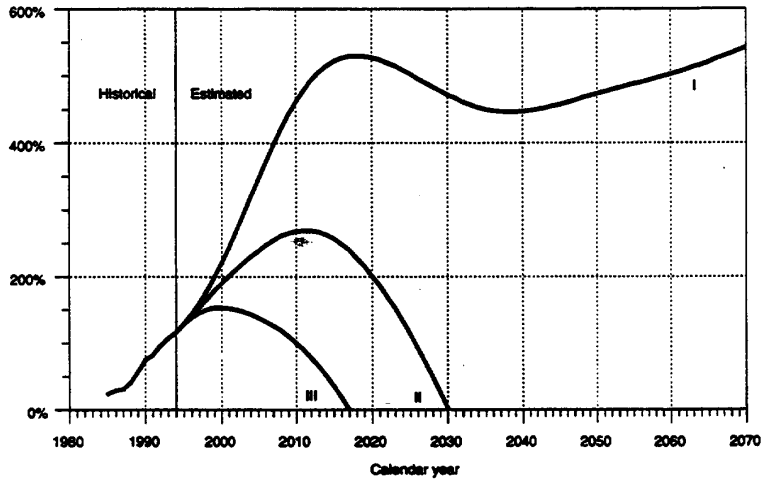
[2]The fund is not estimated to be exhausted within the projection period.

Note: See Glossary for definition of trust fund ratio. The OASDI ratios shown for years after a given fund is estimated to be exhausted are theoretical and are shown for informational purposes only.

Actuarial Analysis

A graphic illustration of the trust fund ratios for the combined trust funds is shown in figure II.F6 for each of the alternative sets of assumptions.

FIGURE II.F6.—ESTIMATED TRUST FUND RATIOS, FOR OASI AND DI TRUST FUNDS COMBINED, CALENDAR YEARS 1985-2070



g. Reasons for Change in Actuarial Balance from Last Report

Reasons for changes from last year's report to this report in the long-range actuarial balance under the intermediate assumptions are itemized in table II.F21. Also shown are the estimated effects associated with each reason for change.

TABLE II.F21.—CHANGE IN ACTUARIAL BALANCE OVER THE NEXT 75 YEARS BASED ON INTERMEDIATE ASSUMPTIONS BY TRUST FUND AND REASON FOR CHANGE

[As a percentage of taxable payroll]

Item	OASI	DI	Combined
Shown in last year's report:			
Income rate	11.81	1.43	13.24
Cost rate	13.28	2.09	15.37
Actuarial balance	−1.46	−.66	−2.13
Changes in actuarial balance due to changes in:			
Legislation	−.40	+.40	+.00
Valuation period	−.06	−.01	−.07
Demographic assumptions	+.11	+.01	+.12
Economic assumptions	+.02	+.00	+.02
Disability assumptions	−.00	−.05	−.05
Methods	−.06	−.01	−.07
Total change in actuarial balance	−.40	+.35	−.05
Shown in this report:			
Actuarial balance	−1.87	−.31	−2.17
Income rate	11.43	1.84	13.27
Cost rate	13.29	2.15	15.44

Note: Totals do not necessarily equal the sums of rounded components.

Legislation enacted since last year's report (see section II.A) is estimated to have a negligible effect on the combined OASDI actuarial balance. The reallocation of payroll tax rates between OASI and DI included in the Social Security Domestic Employment Reform Act of 1994 (Public Law 103-387) does, however, cause a significant change in the actuarial balances for the separate OASI and DI programs. This reallocation, intended to avert DI Trust Fund exhaustion that was estimated to occur in 1995 in last year's report, increased the DI actuarial balance by 0.40 percent of taxable payroll, decreasing the OASI actuarial balance by a corresponding amount.

In changing from the valuation period of last year's report, which was 1994-2068, to the valuation period of this report, 1995-2069, the relatively large negative annual balance for the year 2069 is included. This results in a decrease in the long-range actuarial balance. (Note that the positive balance for 1994 is, in effect, retained because the

funds accumulated during the year are included in the income rate and the actuarial balance for this year's report.)

Several demographic assumptions were modified: (1) the starting population was updated to reflect revised intercensal estimates (1980 through 1990) and new postcensal estimates (1990 through 1993) by the Bureau of the Census, which showed fewer people at high ages than did earlier estimates; (2) projected mortality rates were increased, reflecting the latest data, which were higher than expected for 1992 and 1993; and (3) net other-than-legal immigration was increased by 50,000 per year based on recent analysis by the Immigration and Naturalization Service. These modifications result in increases in the long-range actuarial balance of approximately equal size.

Ultimate economic assumptions were not changed for this report. However, revised short-range economic assumptions, including substantially better growth in the labor force, real GDP, and average real earnings, plus slower growth in prices, since last year's report, resulted in a small improvement in the long-range actuarial balance.

Projections of the number of disabled beneficiaries were increased for years following the short-range period, for two reasons. First, lower ultimate recovery rates were used. This change was made in recognition of the continuing pattern of historically low recovery rates for disabled worker beneficiaries. Second, disabled worker death termination rates were assumed to be lower than in last year's report, decreasing at about the same rate as for the general population death rates. These modifications result in a reduction in the long-range actuarial balance for the DI program.

Several significant improvements and updates were made in the methods used to project the cost and income of the OASDI program. Updated sample data for benefits awarded in 1993 were used as the starting point for projecting the level of average benefits for future beneficiaries. The increase in average benefit levels from the previous sample, for 1992 awards, to the new sample was slightly higher than had been previously projected.

Modifications were made in the method for projecting future changes in the level of average benefits from those represented in the sample.

These changes, along with the effect of using the new sample for 1993, resulted in a reduction in the actuarial balance.

The maximum allowable levels (caps) for projected female labor force participation rates at some ages were raised due to a reduction in the effect of the latest actual observations on these caps. Also, reductions in the rate at which insured individuals claim retirement benefits have resulted in a lower starting level of OASI beneficiaries than was assumed for the last report. These two changes tended to increase the actuarial balance, partially offsetting the reduction due to changes in methods for projecting average benefits.

The cost of the OASDI program has been discussed in this section in relation to taxable payroll, which is a program-related concept that is very useful in analyzing the financial status of the OASDI program. The cost can also be discussed in relation to broader economic concepts, such as the gross domestic product (GDP). OASDI outlays generally rise from a little less than 5 percent of GDP currently to about 6.9 percent of GDP by the end of the 75-year projection period under alternative II. Discussion of both the cost and the taxable payroll of the OASDI program in relation to GDP is presented in section III.C.

G. LONG-RANGE SENSITIVITY ANALYSIS

This section presents estimates which illustrate the sensitivity of the long-range actuarial balance of the OASDI program to changes in selected individual assumptions. The estimates based on the three alternative sets of assumptions (see sections II.D and II.F2) illustrate the effects of varying all of the principal assumptions simultaneously in order to portray a generally more optimistic or pessimistic future, in terms of the financial status of the OASDI program. In the sensitivity analysis presented in this section, the intermediate alternative II is used as the reference point, and one assumption at a time is varied within that alternative. Similar variations in the selected assumptions within the other alternatives would result in similar relative variations in the long-range estimates.

Each table that follows shows the effects of changing a particular assumption on the OASDI summarized income rates, summarized cost rates, and actuarial balances (as defined earlier in this report) for 25-year, 50-year, and 75-year valuation periods. Because the income rate varies only slightly with changes in assumptions, it is not considered in the discussion of the tables. The change in each of the actuarial balances is approximately equal to the change in the corresponding cost rate, but in the opposite direction.

1. Total Fertility Rate

Table II.G1 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II with various assumptions about the ultimate total fertility rate. These assumptions are that the ultimate total fertility rate will be 1.6 children per woman (as assumed for alternative III), 1.9 (as assumed for alternative II), and 2.2 (as assumed for alternative I). The rate is assumed to change gradually from its current level and to reach the various ultimate values in 2019.

TABLE II.G1.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON INTERMEDIATE ESTIMATES WITH VARIOUS FERTILITY ASSUMPTIONS

[As a percentage of taxable payroll]

Valuation period	Ultimate total fertility rate[1]		
	1.6	1.9	2.2
Summarized income rate:			
25-year: 1995-2019	13.44	13.44	13.45
50-year: 1995-2044	13.29	13.28	13.27
75-year: 1995-2069	13.30	13.27	13.24
Summarized cost rate:			
25-year: 1995-2019	12.87	12.91	12.94
50-year: 1995-2044	14.71	14.61	14.51
75-year: 1995-2069	15.92	15.44	14.99
Balance:			
25-year: 1995-2019	+.57	+.54	+.51
50-year: 1995-2044	−1.43	−1.33	−1.24
75-year: 1995-2069	−2.62	−2.17	−1.75

[1]The total fertility rate for any year is the average number of children who would be born to a woman in her lifetime if she were to experience the birth rates by age observed in, or assumed for, the selected year, and if she were to survive the entire child-bearing period. The ultimate total fertility rate is assumed to be reached in 2019.

For the 25-year period, the cost rate for the three fertility assumptions varies by only about 0.07 percent of taxable payroll. In contrast, the 75-year cost rate varies over a wide range, decreasing from 15.92 to 14.99 percent, as the assumed ultimate total fertility rate increases from 1.6 to 2.2. Similarly, while the 25-year actuarial balance varies by only 0.06 percent of taxable payroll, the 75-year actuarial balance varies over a much wider range, from −2.62 to −1.75 percent.

During the 25-year period, the very slight effect of changes in fertility on the working population is more than offset by increases in the number of child beneficiaries. Hence, the program cost slightly increases with higher fertility. For the 75-year long-range period, however, changes in fertility have a relatively greater impact on the labor force than on the beneficiary population. As a result, an increase in fertility significantly reduces the cost rate. Each increase of 0.1 in the ultimate total fertility rate increases the long-range actuarial balance by about 0.15 percent of taxable payroll.

2. Death Rates

Table II.G2 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II with various assumptions about future reductions in death rates. The analysis was developed by varying the percentage decrease assumed to occur during 1994-2069 in the death rates by age, sex, and cause of death.

Actuarial Analysis

The decreases assumed for this period, summarized as changes in the age-sex-adjusted death rate, are about 16 percent (as assumed for alternative I), 35 percent (as assumed for alternative II), and 54 percent (as assumed for alternative III). It should be noted that these reductions do not apply uniformly to all ages, as some variation by age was assumed (see section II.H1) consistent with the objective of selecting assumptions for alternatives I and III that are relatively more optimistic and more pessimistic, respectively, in terms of the financing of the OASDI program.

TABLE II.G2.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON INTERMEDIATE ESTIMATES WITH VARIOUS DEATH-RATE ASSUMPTIONS

[As a percentage of taxable payroll]

Valuation period	Reduction in death rates[1]		
	16 percent	35 percent	54 percent
Summarized income rate:			
25-year: 1995-2019	13.44	13.44	13.45
50-year: 1995-2044	13.26	13.28	13.30
75-year: 1995-2069	13.24	13.27	13.31
Summarized cost rate:			
25-year: 1995-2019	12.68	12.91	13.12
50-year: 1995-2044	14.12	14.61	15.11
75-year: 1995-2069	14.71	15.44	16.27
Balance:			
25-year: 1995-2019	+.75	+.54	+.33
50-year: 1995-2044	–.86	–1.33	–1.81
75-year: 1995-2069	–1.48	–2.17	–2.96

[1]The measure of the reduction in death rates is the decrease in the age-sex-adjusted death rate during 1994-2069.

The variation in cost for the 25-year period is less pronounced than the variation for the 75-year period because the decreases in death rates are assumed to occur gradually and because of the specific changes in the age composition of the population that are projected to occur. The 25-year cost rate increases from 12.68 percent (for 16-percent lower ultimate death rates) to 13.12 percent (for 54-percent lower ultimate rates). The 75-year cost rate increases from 14.71 to 16.27 percent. The actuarial balance decreases from +0.75 to +0.33 percent for the 25-year period, and from –1.48 to –2.96 percent for the 75-year period.

Lower death rates cause both the income (as well as taxable payroll) and the outgo of the OASDI program to be higher than they would otherwise be. The relative increase in outgo, however, exceeds the relative increase in taxable payroll. For any given year, reductions in the death rates for people who have attained the retirement el-

igibility age of 62 (people whose death rates are the highest) increase the number of retired-worker beneficiaries (and, therefore, the amount of retirement benefits paid) without adding significantly to the number of covered workers (and, therefore, to the taxable payroll). Although reductions for people aged 50 to retirement eligibility age do result in significant increases to the taxable payroll, those increases are not large enough to offset the sum of the additional retirement benefits mentioned above and the disability benefits paid to additional beneficiaries in this pre-retirement age group. At ages under 50, death rates are so low that even substantial reductions would not result in significant increases in the numbers of covered workers or beneficiaries. Consequently, if death rates for all ages are lowered by about the same relative amount, outgo increases at a rate greater than the rate of growth in payroll, thereby resulting in higher cost rates. Each additional 10-percentage-point reduction in the age-sex-adjusted death rate assumed to occur in 1994-2069, relative to the 35-percent reduction assumed for alternative II, decreases the long-range actuarial balance by about 0.39 percent of taxable payroll.

3. Net Immigration

Table II.G3 shows the estimated OASDI income rates, cost rates, and actuarial balances, under alternative II with various assumptions about the magnitude of net immigration. These assumptions are that the annual net immigration will be 750,000 persons (as assumed for alternative III), 900,000 persons (as assumed for alternative II), and 1,150,000 persons (as assumed for alternative I).

TABLE II.G3.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON INTERMEDIATE ESTIMATES WITH VARIOUS NET-IMMIGRATION ASSUMPTIONS

[As a percentage of taxable payroll]

Valuation period	Net immigration per year		
	750,000	900,000	1,150,000
Summarized income rate:			
25-year: 1995-2019	13.45	13.44	13.43
50-year: 1995-2044	13.29	13.28	13.26
75-year: 1995-2069	13.28	13.27	13.25
Summarized cost rate:			
25-year: 1995-2019	12.95	12.91	12.83
50-year: 1995-2044	14.70	14.61	14.46
75-year: 1995-2069	15.55	15.44	15.27
Balance:			
25-year: 1995-2019	+.50	+.54	+.61
50-year: 1995-2044	−1.41	−1.33	−1.20
75-year: 1995-2069	−2.28	−2.17	−2.02

For all three periods, the cost rate decreases with increasing rates of net immigration. For the 25-year period, the cost rate decreases from 12.95 percent of taxable payroll (for annual net immigration of 750,000 persons) to 12.83 percent (for annual net immigration of 1,150,000 persons). For the 50-year period, it decreases from 14.70 percent to 14.46 percent, and for the 75-year period, it decreases from 15.55 percent to 15.27 percent. The actuarial balance increases from +0.50 to +0.61 percent for the 25-year period, from –1.41 to –1.20 for the 50-year period, and from –2.28 to –2.02 percent for the 75-year period.

The cost rate decreases with increasing rates of net immigration because immigration occurs at relatively young ages, thereby increasing the numbers of covered workers earlier than the numbers of beneficiaries. Each additional group of 100,000 immigrants relative to the 900,000 net immigration assumed for alternative II, increases the long-range actuarial balance by about 0.06 percent of taxable payroll.

4. Real-Wage Differential

Table II.G4 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II with various assumptions about the real-wage differential. These assumptions are that the ultimate real-wage differential will be 0.5 percentage point (as assumed for alternative III), 1.0 percentage points (as assumed for alternative II), and 1.5 percentage points (as assumed for alternative I). In each case, the ultimate annual increase in the CPI is assumed to be 4.0 percent (as assumed for alternative II), yielding ultimate percentage increases in average annual wages in covered employment of 4.5, 5.0, and 5.5 percent under alternatives III, II, and I, respectively.

For the 25-year period, the cost rate decreases from 13.30 percent (for a real-wage differential of 0.5 percentage point) to 12.52 percent (for a differential of 1.5 percentage points). For the 50-year period, it decreases from 15.16 to 14.05 percent, and for the 75-year period it decreases from 16.04 to 14.84 percent. The actuarial balance increases from +0.19 to +0.88 percent for the 25-year period, from –1.83 to –0.83 for the 50-year period, and from –2.71 to –1.63 percent for the 75-year period.

TABLE II.G4.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON INTERMEDIATE ESTIMATES WITH VARIOUS REAL-WAGE ASSUMPTIONS

[As a percentage of taxable payroll]

Valuation period	Ultimate percentage increase in wages-CPI[1]		
	4.5-4.0	5.0-4.0	5.5-4.0
Summarized income rate:			
25-year: 1995-2019	13.49	13.44	13.40
50-year: 1995-2044	13.34	13.28	13.22
75-year: 1995-2069	13.33	13.27	13.21
Summarized cost rate:			
25-year: 1995-2019	13.30	12.91	12.52
50-year: 1995-2044	15.16	14.61	14.05
75-year: 1995-2069	16.04	15.44	14.84
Balance:			
25-year: 1995-2019	+.19	+.54	+.88
50-year: 1995-2044	−1.83	−1.33	−.83
75-year: 1995-2069	−2.71	−2.17	−1.63

[1]The first value in each pair is the assumed ultimate annual percentage increase in average wages in covered employment. The second value is the assumed ultimate annual percentage increase in the Consumer Price Index. The difference between the two values is the real-wage differential.

The cost rate decreases with increasing real-wage differentials, because the higher real-wage levels increase the taxable payroll, while benefit increases are not affected. Although the initial benefit levels are higher because of the higher wages, these increases are more than offset by the increases in the taxable payroll of future workers. Each 0.5-percentage-point increase in the assumed real-wage differential increases the long-range actuarial balance by about 0.54 percent of taxable payroll.

5. Consumer Price Index

Table II.G5 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II with various assumptions about the rate of increase for the Consumer Price Index (CPI). These assumptions are that the ultimate annual increase in the CPI will be 3.0 percent (as assumed for alternative I), 4.0 percent (as assumed for alternative II), and 5.0 percent (as assumed for alternative III). In each case, the ultimate real-wage differential is assumed to be 1.0 percentage points (as assumed for alternative II), yielding ultimate percentage increases in average annual wages in covered employment of 4.0, 5.0, and 6.0 percent under alternatives I, II, and III, respectively.

TABLE II.G5.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON INTERMEDIATE ESTIMATES WITH VARIOUS CPI-INCREASE ASSUMPTIONS

[As a percentage of taxable payroll]

Valuation period	Ultimate percentage increase in wages-CPI[1]		
	4.0-3.0	5.0-4.0	6.0-5.0
Summarized income rate:			
25-year: 1995-2019	13.46	13.44	13.42
50-year: 1995-2044	13.30	13.28	13.26
75-year: 1995-2069	13.29	13.27	13.25
Summarized cost rate:			
25-year: 1995-2019	13.05	12.91	12.77
50-year: 1995-2044	14.81	14.61	14.40
75-year: 1995-2069	15.68	15.44	15.21
Balance:			
25-year: 1995-2019	+.42	+.54	+.66
50-year: 1995-2044	−1.52	−1.33	−1.14
75-year: 1995-2069	−2.39	−2.17	−1.96

[1]The first value in each pair is the assumed ultimate annual percentage increase in average wages in covered employment. The second value is the assumed ultimate annual percentage increase in the Consumer Price Index.

For all three periods, the cost rate decreases with greater assumed rates of increase in the CPI. For the 25-year period, the cost rate decreases from 13.05 (for CPI increases of 3.0 percent) to 12.77 percent (for CPI increases of 5.0 percent). For the 50-year period, it decreases from 14.81 to 14.40 percent, and for the 75-year period, it decreases from 15.68 to 15.21 percent. The actuarial balance increases from +0.42 to +0.66 percent for the 25-year period, from −1.52 to −1.14 for the 50-year period, and from −2.39 to −1.96 percent for the 75-year period.

The patterns described above result primarily from the time lag between the effects of the CPI changes on taxable payroll and on benefit payments. When assuming a greater rate of increase in the CPI (in conjunction with a constant real-wage differential), the effect on taxable payroll of the implied greater rate of increase in average wages is experienced immediately, while the effect on benefits of the greater rate of increase in the CPI is experienced with a lag of about 1 year. In addition, the effect on benefits of the greater rate of increase in average wages is experienced no sooner than 2 years later. Thus, the higher taxable payrolls have a stronger effect than the higher benefits, thereby resulting in lower cost rates. The effect of each 1.0-percentage-point increase in the rate of change assumed for the CPI is an increase in the long-range actuarial balance of about 0.21 percent of taxable payroll.

6. Real Interest Rate

Table II.G6 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II with various assumptions about the annual nominal real interest rate for special public-debt obligations issuable to the trust funds, which are compounded semiannually. These assumptions are that the ultimate annual real interest rate will be 1.5 percent (as assumed for alternative III), 2.3 percent (as assumed for alternative II), and 3.0 percent (as assumed for alternative I). In each case, the ultimate annual increase in the CPI is assumed to be 4.0 percent (as assumed for alternative II), resulting in ultimate annual yields of 5.6, 6.4, and 7.1 percent under alternatives III, II, and I, respectively.

TABLE II.G6.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON INTERMEDIATE ESTIMATES WITH VARIOUS REAL INTEREST ASSUMPTIONS

[As a percentage of taxable payroll]

Valuation period	Ultimate annual real interest rate		
	1.5 percent	2.3 percent	3.0 percent
Summarized income rate:			
25-year: 1995-2019	13.40	13.44	13.48
50-year: 1995-2044	13.24	13.28	13.32
75-year: 1995-2069	13.24	13.27	13.30
Summarized cost rate:			
25-year: 1995-2019	13.00	12.91	12.83
50-year: 1995-2044	14.92	14.61	14.35
75-year: 1995-2069	15.92	15.44	15.05
Balance:			
25-year: 1995-2019	+.40	+.54	+.65
50-year: 1995-2044	−1.68	−1.33	−1.03
75-year: 1995-2069	−2.68	−2.17	−1.75

For the 25-year period, the cost rate decreases slightly with increasing real interest rates from 13.00 percent (for an ultimate real interest rate of 1.5 percent) to 12.83 percent (for an ultimate real interest rate of 3.0 percent). For the 50-year period, it decreases from 14.92 to 14.35 percent, and for the 75-year period, it decreases from 15.92 to 15.05 percent. The actuarial balance increases from +0.40 to +0.65 percent for the 25-year period, from −1.68 to −1.03 percent for the 50-year period, and from −2.68 to −1.75 percent for the 75-year period. Each 0.5-percentage-point increase in the assumed real interest rate increases the long-range actuarial balance by about 0.31 percent of taxable payroll.

7. Disability Incidence Rates

Table II.G7 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II with various assumptions concerning future disability incidence rates. For all three alternatives, incidence rates by age and sex are assumed to increase during the early years of the projection period before declining to ultimate levels, which are attained in 2009. At that time they reach levels that, in comparison to the corresponding annual rates experienced during the base period 1984-86, are higher by about 8 percent for alternative I, 35 percent for alternative II, and 62 percent for alternative III.

TABLE II.G7.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON INTERMEDIATE ESTIMATES WITH VARIOUS DISABILITY INCIDENCE ASSUMPTIONS

[As a percentage of taxable payroll]

Valuation period	Disability incidence rates based on alternative—		
	I	II	III
Summarized income rate:			
25-year: 1995-2019	13.44	13.44	13.44
50-year: 1995-2044	13.27	13.28	13.28
75-year: 1995-2069	13.27	13.27	13.27
Summarized cost rate:			
25-year: 1995-2019	12.70	12.91	13.11
50-year: 1995-2044	14.34	14.61	14.87
75-year: 1995-2069	15.16	15.44	15.73
Balance:			
25-year: 1995-2019	+.74	+.54	+.33
50-year: 1995-2044	−1.06	−1.33	−1.59
75-year: 1995-2069	−1.89	−2.17	−2.45

For the 25-year period, the cost rate increases with increasing disability incidence rates from 12.70 percent (for the relatively low rates assumed for alternative I) to 13.11 percent (for the relatively high rates assumed for alternative III). For the 50-year period, it increases from 14.34 to 14.87 percent, and for the 75-year period, it increases from 15.16 to 15.73 percent. The actuarial balance decreases from +0.74 to +0.33 percent for the 25-year period, from −1.06 to −1.59 percent for the 50-year period, and from −1.89 to −2.45 percent for the 75-year period. Each 10-percentage point increase from the base period in the ultimate assumed gross incidence rate decreases the long-range OASDI actuarial balance by about 0.10 percent of taxable payroll.

8. Disability Termination Rates

Table II.G8 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II with various assumptions about future disability termination rates.

For alternative II, death-termination rates by age and sex are assumed to decline until they reach levels by the end of the 75-year period that, in comparison to the corresponding annual rates experienced during the base period 1977-80, are lower by about 33 percent for men and 26 percent for women. For the other alternatives, the rates are assumed to spread gradually from the rates for alternative II. By the end of the projection period, for men the rates are 16 percent lower for alternative I and 48 percent lower for alternative III, and for women they are 6 percent lower for alternative I and 46 percent lower for alternative III.

For alternative II, ultimate recovery-termination rates by age and sex are assumed to be attained in 2009; such rates are assumed to be about 50 percent lower than those experienced in the base period, 1977-80. For the other alternatives, the rates are assumed to spread gradually from the rates for alternative II; from that year until the end of the projection period the rates under alternative I and III are 20 percent higher and lower, respectively, than the rates for alternative II.

TABLE II.G8.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON INTERMEDIATE ESTIMATES WITH VARIOUS DISABILITY TERMINATION ASSUMPTIONS

[As a percentage of taxable payroll]

Valuation period	Disability termination rates based on alternative— I	II	III
Summarized income rate:			
25-year: 1995-2019	13.44	13.44	13.44
50-year: 1995-2044	13.28	13.28	13.28
75-year: 1995-2069	13.27	13.27	13.27
Summarized cost rate:			
25-year: 1995-2019	12.87	12.91	12.93
50-year: 1995-2044	14.56	14.61	14.66
75-year: 1995-2069	15.38	15.44	15.50
Balance:			
25-year: 1995-2019	+.57	+.54	+.51
50-year: 1995-2044	−1.28	−1.33	−1.38
75-year: 1995-2069	−2.11	−2.17	−2.23

For the 25-year period, the cost rate increases with decreasing disability termination rates from 12.87 percent (for the relatively high

rates assumed for alternative I) to 12.93 percent (for the relatively low rates assumed for alternative III). For the 50-year period, it increases from 14.56 to 14.66 percent, and for the 75-year period, it increases from 15.38 to 15.50 percent. The actuarial balance decreases from +0.57 to +0.51 percent for the 25-year period, from –1.28 to –1.38 percent for the 50-year period, and from –2.11 to –2.23 percent for the 75-year period.

H. ASSUMPTIONS AND METHODS UNDERLYING THE ACTUARIAL ESTIMATES

This section describes the assumptions and methods which underlie the actuarial estimates in this report. Unless specifically stated otherwise, the assumptions and methods were used for each of the three alternatives and for both the short-range and long-range periods. Some of the principal economic and demographic assumptions which vary by alternative are summarized in section II.D. Further details about the assumptions, methods, and actuarial estimates are contained in Actuarial Studies published by the Office of the Actuary, Social Security Administration, which are available upon request.[1]

1. Total Population

Projections were made of the population in the Social Security Area by age, sex, and marital status as of January 1 of each year 1994 through 2080. The starting Social Security Area population for January 1, 1993 was developed from the estimated United States population, including armed forces overseas, based on data from the Bureau of the Census, adjusted for net census undercount and increased for other U.S. citizens living abroad and for populations in the geographic areas covered by the OASDI program but not included in the U.S. population. This starting population was then projected using assumed rates of birth, death, marriage, and divorce and assumed levels of migration. Since the last Trustees' Report, the Bureau of the Census has revised the intercensal 1980-1990 population figures. These revised figures are included in this year's report. Because of these changes, historical numbers after 1980 will have changed from prior Trustees' Reports.

Historically, fertility rates in the United States have fluctuated widely. The total fertility rate is defined to be the average number of children that would be born to a woman in her lifetime if she were to experience the birth rates by age observed in, or assumed for, the selected year, and if she were to survive the entire child-bearing period. The total fertility rate decreased from 3.3 children per woman after World War I to 2.1 during the Great Depression, rose to 3.7 in 1957, and then fell to 1.7 in 1976. After 1976, the total fertility rate began to rise again, reaching a level of 2.07 for 1991. Since then, it

[1] To obtain copies of this report or studies published by the Office of the Actuary write to: Office of the Actuary, Social Security Administration, Suite 700 Altmeyer Building, 6401 Security Boulevard, Baltimore, Maryland 21235; or call (410)965-3015.

has declined slightly to a level currently estimated at 2.06 for 1993 and 1994.

These variations in fertility rates have resulted from changes in many factors, including social attitudes, economic conditions, and the use of birth-control methods. Future fertility rates may be expected to remain close to recent levels. The recent historical and projected trends in certain population characteristics are consistent with a continued relatively low fertility rate. These trends include the rising percentages of women who have never married, of women who are divorced, and of young women who are in the labor force. Based on consideration of these factors, ultimate total fertility rates of 2.2, 1.9, and 1.6 children per woman were selected for alternatives I, II, and III, respectively. For each alternative, the total fertility rate is assumed to reach its ultimate level in 2019. A rate of 2.1 would ultimately result in a nearly constant population if net immigration were zero and if death rates were constant.

Historically, death rates in the United States have declined fairly steadily. Historical rates used in preparing this report were calculated using data from the National Center for Health Statistics (NCHS) that are final for 1900-91 (by cause of death starting in 1968) and provisional for 1992 and 1993. For ages 65 and over, Medicare final data for years 1968 through 1992, and provisional data for 1993 were used. The age-sex-adjusted death rate—which is calculated here as the crude rate that would occur in the enumerated total population as of April 1, 1980, if that population were to experience the death rates by age and sex for the selected year—declined at an average rate of 1.2 percent per year between 1900 and 1993. Between 1968 and 1991, the period for which death rates are available by cause, the age-sex adjusted death rate (for all causes combined) declined at an average rate of 1.4 percent per year. However, since 1982, age-sex adjusted death rates have declined more slowly, at average rates of 0.7 percent between 1982 and 1991, and 0.5 percent between 1982 and 1993.

Reductions in death rates have resulted from many factors, including increased medical knowledge and availability of health-care services, and improvements in personal health-care practices such as diet and exercise. Based on consideration of the expected rate of future progress in these and other areas, three alternative sets of ultimate annual percentage reductions in central death rates by age, sex, and cause

of death were selected for 2019 and later. The intermediate set, which is used for alternative II, is considered to be the most likely to occur. Except for those causes of death which primarily affect children and people of working age, the average annual percentage reductions used for alternative I are smaller than those for alternative II, while those used for alternative III are greater.

Between 1993 and 2019, the reductions in central death rates for alternative II are assumed to change gradually from the average annual reductions by age, sex, and cause of death observed between 1968 and 1991, to the ultimate annual percentage reductions by age, sex, and cause of death assumed for 2019 and later. Alternative I reductions are assumed to change gradually from 50 percent of the average annual reductions observed between 1968 and 1991, while alternative III reductions are assumed to change gradually from 150 percent of the average annual reductions observed between 1968 and 1991.

After adjustment for changes in the age-sex distribution of the population, the resulting death rates were projected to decline at an average annual rate of about 0.3 percent, 0.6 percent, and 1.0 percent between 1993 and 2069 for alternatives I, II, and III, respectively.

For calendar years 1993 and 1994, the net legal immigration is assumed to be 660,000 and 645,000 persons per year, respectively. In addition, for these years the net other-than-legal immigration assumption is 250,000 persons per year. The Immigration and Naturalization Service (INS) is currently in the process of revising its estimates of net illegal immigration based on (1) information provided by persons legalized under the Immigration Reform and Control Act of 1986, (2) counts of unauthorized immigrants in census surveys, (3) the number of overstays of legally admitted persons, and (4) other INS statistics. Based on information provided by the INS, assumed annual rates of net other-than-legal immigration have been increased by 50,000 per year in this report. The Bureau of the Census also is increasing its estimates.

The Immigration Act of 1990 increased substantially the number of legal immigrants permitted starting in 1992. For calendar year 1995, net immigration is assumed to be 1,180,000, 910,000, and 750,000 persons per year for alternatives I, II, and III, respectively. Of these net numbers of immigrants, 780,000, 660,000, and 600,000, respec-

tively, are assumed to be legal, and the remainders are assumed to be other-than-legal. Based on changes in immigration categories and limits specified in the 1990 legislation, the estimated level of net legal immigration varies for years through 2000, reaching an assumed ultimate level for 2001 and later. Net immigration for 1996 through 2001 is assumed to be 1,200,000, 925,000, and 750,000 persons per year for alternatives I, II, and III, respectively. Of these net numbers of immigrants, 800,000, 675,000, and 600,000, respectively, are assumed to be legal, and the remainders are assumed to be other-than-legal. Net immigration for 2002 and later is assumed to be 1,150,000, 900,000, and 750,000 persons per year for alternatives I, II, and III, respectively. Of these net numbers of immigrants, 750,000, 650,000, and 600,000, respectively, are assumed to be legal, and the remainders are assumed to be other-than-legal.

Table II.H1 shows the projected population as of July 1 by broad age group, for the three alternatives. Also shown are tabulated aged dependency ratios (see table footnotes for definitions). Because eligibility for many types of OASDI benefits depends on marital status, the population was projected by marital status, as well as by age and sex. Marriage and divorce rates were based on recent data from the National Center for Health Statistics.

TABLE II.H1.—SOCIAL SECURITY AREA POPULATION AS OF JULY 1 AND DEPENDENCY RATIOS, BY ALTERNATIVE AND BROAD AGE GROUP, CALENDAR YEARS 1950-2070

Calendar year	Population (in thousands)				Dependency ratio	
	Under 20	20-64	65 and over	Total	Aged[1]	Total[2]
Historical data:						
1950	53,895	92,739	12,752	159,386	0.138	0.719
1960	72,989	99,842	17,250	190,081	.173	.904
1965	80,124	104,826	19,092	204,041	.182	.946
1970	80,672	113,184	20,920	214,776	.185	.898
1975	78,428	122,852	23,265	224,545	.189	.828
1980	74,553	134,406	26,145	235,104	.195	.749
1985	73,141	144,695	29,026	246,861	.201	.706
1990	74,975	152,614	31,928	259,517	.209	.700
Intermediate:						
1995	78,949	159,928	34,205	273,082	.214	.708
2000	81,461	168,352	35,338	285,151	.210	.694
2005	81,982	177,640	36,674	296,296	.206	.668
2010	81,734	185,732	39,642	307,107	.213	.653
2015	81,221	190,925	45,510	317,656	.238	.664
2020	81,758	192,846	52,805	327,409	.274	.698
2025	82,570	192,302	61,118	335,990	.318	.747
2030	83,014	192,107	68,012	343,134	.354	.786
2035	83,015	194,313	71,514	348,841	.368	.795
2040	83,061	197,708	72,568	353,336	.367	.787
2045	83,307	200,602	73,056	356,965	.364	.779
2050	83,700	201,894	74,502	360,096	.369	.784
2055	84,073	202,259	76,750	363,082	.379	.795
2060	84,332	202,143	79,668	366,143	.394	.811
2065	84,521	203,005	81,755	369,281	.403	.819
2070	84,738	204,200	83,373	372,312	.408	.823
Low Cost:						
1995	79,095	160,236	34,193	273,525	.213	.707
2000	82,474	169,757	35,123	287,354	.207	.693
2005	84,494	180,107	36,072	300,673	.200	.669
2010	86,422	189,203	38,579	314,204	.204	.661
2015	88,806	195,450	43,967	328,223	.225	.679
2020	92,630	198,888	50,741	342,259	.255	.721
2025	96,633	200,521	58,431	355,585	.291	.773
2030	100,105	203,164	64,596	367,865	.318	.811
2035	103,071	208,837	67,390	379,298	.323	.816
2040	106,048	216,345	67,906	390,299	.314	.804
2045	109,451	223,804	68,031	401,287	.304	.793
2050	113,184	230,169	69,233	412,587	.301	.793
2055	116,888	236,255	71,316	424,459	.302	.797
2060	120,399	242,582	74,043	437,024	.305	.802
2065	123,843	250,183	76,176	450,202	.304	.799
2070	127,414	258,170	78,193	463,777	.303	.796

TABLE II.H1.—SOCIAL SECURITY AREA POPULATION AS OF JULY 1 AND DEPENDENCY RATIOS, BY ALTERNATIVE AND BROAD AGE GROUP, CALENDAR YEARS 1950-2070 (Cont.)

Calendar year	Population (in thousands)				Dependency ratio	
	Under 20	20-64	65 and over	Total	Aged[1]	Total[2]
High Cost:						
1995	78,852	159,744	34,222	272,818	0.214	0.708
2000	80,662	167,451	35,570	283,682	.212	.694
2005	79,858	175,855	37,274	292,987	.212	.666
2010	77,652	183,256	40,678	301,587	.222	.646
2015	74,525	187,905	47,037	309,467	.250	.647
2020	72,160	188,901	54,920	315,981	.291	.673
2025	70,281	186,830	63,960	321,071	.342	.719
2030	68,332	184,447	71,780	324,558	.389	.760
2035	66,161	183,783	76,341	326,285	.415	.775
2040	64,245	183,655	78,421	326,321	.427	.777
2045	62,463	182,649	79,829	324,941	.437	.779
2050	60,771	179,686	82,075	322,532	.457	.795
2055	59,172	175,362	84,995	319,529	.485	.822
2060	57,632	170,086	88,551	316,269	.521	.859
2065	56,143	165,779	90,952	312,873	.549	.887
2070	54,728	162,026	92,473	309,228	.571	.909

[1]Population aged 65 and over, divided by population aged 20-64.

[2]Sum of population aged 65 and over, and population under age 20, divided by population aged 20-64.

Note: Totals do not necessarily equal the sums of rounded components.

2. Covered Population

The number of covered workers in a year is defined as the number of persons who, at any time during the year, have OASDI taxable earnings. Projections of the number of covered workers were made by applying projected coverage rates to the projected Social Security Area population. The coverage rates—i.e., the number of covered workers in the year, as a percentage of the population as of July 1—were determined by age and sex using projected labor force participation rates and unemployment rates, and their historical relationships to coverage rates. In addition, the coverage rates were adjusted to reflect the increase in coverage of (1) State and local government employment that will result from the Omnibus Budget Reconciliation Act of 1990 and (2) Federal civilian employment that will result from the 1983 Social Security Amendments.

Labor force participation rates were projected by age and sex, taking into account projections of the percentage of the population that is married, the percentage of the population that is disabled, the number of children in the population, the level of retirement benefits, and the state of the economy. All of these factors vary by alternative. For men, the projected age-adjusted labor force participation rates for the year 2070 for alternatives I, II, and III are 1.1, 1.5, and 2.5

percentage points lower, respectively, than the 1994 level of 75.2 percent. For women, the projected age-adjusted labor force participation rates increase for alternatives I and II and decrease for alternative III. The projected age-adjusted rates for 2070 are 2.4, 1.0, and –1.2 percentage points, respectively, different from the 1994 level of 58.7 percent.

The total age-sex-adjusted unemployment rate averaged 5.7 percent for the last 30 years 1965-94 and 6.1 percent for the 10 years 1985-94. The ultimate total age-sex-adjusted unemployment rate is assumed to be 5.0, 6.0, and 7.0 percent for alternatives I, II, and III, respectively. Because the unemployment rate depends on the state of the economy, cyclical trends are reflected in the short-range period. Unemployment levels off to the assumed ultimate age-sex-adjusted rate by the year 2005, for each of the three alternatives.

The projected age-adjusted coverage rate for men changes from its 1994 level of 73.8 percent to 72.8, 71.9, and 70.8 percent in 2070 on the basis of alternatives I, II, and III, respectively. For women, it changes from its 1994 level of 61.1 percent to 62.2, 60.4, and 57.8 percent for alternatives I, II, and III, respectively.

3. Average Earnings, Inflation, and Real Interest Rate

Future increases in average earnings and in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W, hereinafter denoted as "CPI") will directly affect the OASDI program. Increases in the CPI directly affect the automatic cost-of-living benefit increases, while inflation, in general, affects the nominal levels of average earnings, GDP, and taxable payroll. Average earnings in covered employment for each year have a direct effect on the size of the taxable payroll and on the future level of average benefits. In addition, increases in average wages in the U.S. economy directly affect the indexation, under the automatic-adjustment provisions in the law, of the benefit formulas, the contribution and benefit base, the exempt amounts under the retirement earnings test, the amount of earnings required for a quarter of coverage, and under certain circumstances, the automatic cost-of-living benefit increases.

Increases in average earnings were projected in two components—average earnings of wage-and-salary workers, usually referred to as average wages (and shown for OASDI covered employment in table

II.D1 of this report), and average net earnings of self-employed persons. Each of these was subdivided into increases in real average earnings and increases in the CPI. For simplicity, real increases in the average covered wage are sometimes expressed in the form of real-wage differentials—i.e., the percentage increase in the average nominal wage minus the percentage increase in the CPI.

The assumed ultimate increases in average real earnings are based on analysis of trends in productivity gains and the factors linking productivity gains with increases in average real earnings. For the 40 years 1954-93, annual increases in productivity for the total U.S. economy averaged 1.6 percent, the result of average annual increases of 2.4, 2.3, 0.8, and 1.0 percent for the 10-year periods 1954-63, 1964-73, 1974-83 and 1984-93, respectively. Meanwhile, the average annual rate of change in average real earnings for the total U.S. economy was an increase of 0.9 percent for the 40 years 1954-93, the result of average annual increases of 2.0, 2.1, –1.5, and 1.2 percent, respectively, for the aforementioned 10-year periods. The change in the linkages between annual increases in productivity and real earnings averaged –0.7 percent for the 40 years 1954-93, and –0.5, –0.2, –2.3, and 0.2 percent, respectively, for the aforementioned 10-year periods. The change in the linkages reflects changes in such factors as the average number of hours worked per year, labor's share of total output, the proportion of employee compensation paid as wages, and price adjustment reflecting the ratio of the GDP implicit price deflator to the CPI.

The average annual rate of change in the average real wage in OASDI covered employment was 1.1 percent over the 40 years 1954-93. However, the average annual rates of change over the 10-year periods varied considerably. The average annual rates of change for the 10-year periods 1954-63, 1964-73, 1974-83, and 1984-93 were 2.1 percent, 1.7 percent, –0.4 percent and 1.0 percent, respectively.

The ultimate annual increases in productivity for all sectors—wage-and-salary workers, self-employed persons, and the total economy—are assumed to be about 1.7, 1.4, and 1.1 percent for alternatives I, II, and III, respectively. The corresponding ultimate annual rates of change in the linkages for wage-and-salary workers are assumed to be declines of 0.2, 0.4, and 0.6 percent for alternatives I, II, and III, respectively. These linkages are made up of assumed annual decreases of 0.1, 0.2, and 0.3 percent in average hours worked

per year, and 0.1, 0.2, and 0.3 percent annual declines in wages as a share of compensation, for alternatives I, II, and III, respectively. No ultimate change is assumed for the historically relatively stable ratio of employee compensation to GDP. The resulting ultimate real-wage differentials are 1.5, 1.0, and 0.5 percent for alternatives I, II, and III, respectively. Ultimate annual declines in the linkages for self-employed persons are smaller because the proportion of reported compensation that is considered earnings remains constant. As a result, ultimate average real-earnings growth rates for the self-employed are assumed to be higher than for wage-and-salary workers. The corresponding ultimate average real-earnings for wage-and-salary workers and self-employed persons, combined, are slightly higher than those assumed for wage-and-salary workers only.

Historically, the CPI has increased, on average, by 4.3 percent for the 40 years 1955-94, 5.3 percent for the 30 years 1965-94, 5.5 percent for the 20 years 1975-94, and 3.5 percent for the 10 years 1985-94. The 5.5 percent increase during 1975-94 reflects sharp increases in oil prices and their subsequent effect on the overall economy. The ultimate average annual CPI increases of 3.0, 4.0, and 5.0 percent for alternatives I, II, and III, respectively, were chosen to include a reasonable range of possible future experience. The GDP implicit price deflator has increased by 4.4 percent annually for the 40 years 1955-94, 5.2 percent annually for the 30 years 1965-94, 5.3 percent annually for the 20 years 1975-94, and 3.3 percent annually for the 10 years 1985-94. For this Trustees' Report, increases in the GDP implicit price deflator are assumed to be slower by about 0.2 percent, 0.3 percent, and 0.5 percent annually than increases in the CPI-W for alternatives I, II, and III, respectively, for the first 10 projection years 1995-2004. The assumed differential between the increase in the GDP implicit price deflator and the increase in the CPI-W reflects the anticipation of three trends for the first 10 projection years 1995-2004. These are: (1) relatively slower increases in computer prices, which are weighted more heavily in the implicit price deflator, (2) relatively faster increases in energy prices which are weighted more heavily in the CPI, and (3) relatively faster increases in health service prices, which are a larger component of the CPI. However, ultimate annual rates of increase in the GDP implicit price deflator are assumed to be the same, for each alternative, as for the CPI-W.

The ultimate increases in average annual wages in covered em-

ployment are assumed to be 4.5, 5.0, and 5.5 percent, for alternatives I, II, and III, respectively. These were obtained, for each alternative, by adding the assumed annual percentage increase in the CPI to the assumed real-wage differential. Ultimate increases in average wages and earnings for the U.S. economy are very similar to those assumed for average wages in covered employment.

The interest rate considered in this report is the nominal interest rate, which is compounded semiannually, for special U.S. government obligations issuable to the trust funds in each of 12 months of the year. The real interest rate is defined to be the annual (compounded) yield rate for investments in these securities less growth in the CPI-W.

In developing a reasonable range of assumed future real interest rates for the three alternatives, historical experience was examined for the 40 years, 1954-93, and for each of the 10-year subperiods, 1954-63, 1964-73, 1974-83, and 1984-93. For the 40-year period, the real interest rate averaged 2.3 percent per year. For the four 10-year subperiods, the real interest rates averaged 1.4, 1.6, 0.8, and 5.6 percent per year, respectively. The assumed ultimate real interest rates are 3.0 percent, 2.3 percent, and 1.5 percent for alternatives I, II, and III, respectively. The projected interest rates are assumed to trend toward these ultimate interest rates, attaining the ultimate values after the tenth projection year.

4. Taxable Payroll and Taxes

The taxable payroll for any period is that amount which, when multiplied by the combined employee-employer tax rate, yields the total amount of taxes paid by employees, employers, and the self-employed for work during the period. The taxable payroll is important not just in estimating OASDI income, but also in determining income and cost rates, and actuarial balances. These terms are defined in the introduction to the section entitled "Actuarial Estimates."

In practice, the taxable payroll is calculated as a weighted average of the earnings on which employees, employers, and self-employed persons make contributions to the OASDI program. The weighting takes into account the lower tax rates, as compared to the combined employee-employer rate, which apply to multiple-employer "excess wages," and which did apply, before 1984, to net earnings from

self-employment and, before 1988, to tips. For 1983 and later, taxable payroll also includes deemed wage credits for military service. Estimates of taxable earnings for employees, employers, and the self-employed were developed from corresponding estimates of earnings in the U.S. economy, by means of factors which adjust for various differences in these measures. The factors adjust total U.S. earnings by removing earnings from noncovered employment, adding earnings from various outlying areas which are covered by Social Security but are not included in published "U.S." data, and removing earnings above the taxable earnings base.

Decreases in the ratio of taxable earnings to earnings in OASDI covered employment since 1984, due to the higher proportion of total covered wages earned by very high wage earners, are projected to continue through the first 10 years of the projection. The ratio of taxable wages to wages in covered employment is projected to decline from a level of 0.886 for 1994 to ultimate levels of 0.879, 0.862, and 0.855, by the end of the tenth projection year for alternatives I, II, and III, respectively. These ultimate ratios of taxable earnings to OASDI covered earnings are about the same as were assumed for the 1994 Trustees' Report.

Estimates of taxes collected were developed from the estimates of taxable earnings by applying the employee, employer, or self-employed tax rate, and by taking into account the lag between the time the tax liability is incurred and the time the taxes are collected.

5. Insured Population

There are three basic types of insured status under the OASDI program: fully insured, currently insured, and disability insured. Fully insured status is required of an aged worker for eligibility to a primary retirement benefit and for the eligibility of that worker's spouse and children to auxiliary benefits. Fully insured status is also required of a deceased worker for the eligibility of the worker's survivors to benefits (with the exception of child survivors and parents of eligible child survivors, in which cases the deceased worker is required to have had either currently insured status or fully insured status). Disability insured status, which is more restrictive than fully insured status, is required of a disabled worker for eligibility to a

primary disability benefit and for the eligibility of the worker's spouse and children to auxiliary benefits.

Projections of the percentage of the population that is fully insured were made by age and sex, from estimated distributions of workers by accumulated quarters of coverage based on past and projected coverage rates and amounts of earnings required for quarters of coverage. Currently insured status was disregarded for purposes of these estimates, because the number of cases in which eligibility for benefits is based solely on currently insured status is relatively small. Projections of the percentage of fully insured persons who are also disability insured were made by age and sex based on past and projected coverage rates, the requirement for disability insured status, and their historical relationships. Finally, the fully insured and disability insured populations were developed from the projected total population by applying the appropriate percentages.

Under this procedure, the percentage of the Social Security Area population aged 62 and over that is fully insured is projected to increase from 77.7 on January 1, 1994, to 90.9, 90.7, and 90.0 on January 1, 2070, based on alternatives I, II, and III, respectively. The percentage for females is projected to increase significantly, while that for males is projected to decrease slightly. Based on alternative II, for example, the percentage for males is projected to decrease during this period from 92.6 to 92.2, while that for females is projected to increase from 66.9 to 89.4.

The fully insured population by age and sex was further subdivided by marital status, using the variation in labor force participation rates by marital status to estimate the variation in coverage rates by marital status. These coverage rates were then used to estimate the variation in the fully insured rates by marital status.

6. Old-Age and Survivors Insurance Beneficiaries

The number of OASI beneficiaries was projected for each type of benefit separately, by the sex of the worker on whose earnings the benefits are based, and by the age of the beneficiary. For selected types of benefits, the number of beneficiaries was also projected by marital status.

For the short-range period, the number of retired-worker benefi-

ciaries was developed by applying award rates to the aged fully insured population less those persons entitled to retired-worker, disabled-worker, or widow(er)'s benefits, and by applying termination rates to the number of persons already receiving retired-worker benefits.

For the long range, the number of retired-worker beneficiaries who were not previously converted from disabled-worker beneficiary status was projected as a percentage of the "exposed population," i.e., the aged fully insured population less those persons entitled to or converted from disability benefits and those insured persons entitled to widow(er)'s benefits. The percentage for ages 70 and over was assumed to be nearly 100, because the retirement earnings test and delayed retirement credit do not apply after age 70. The percentage for each age 62 through 69 was projected in accordance with observed historical and projected short-range trends, with an adjustment to reflect changes in the ratio of the monthly benefit amount payable at each age of entitlement to the amount payable at age-70 entitlement. As the increases in the delayed retirement credit become effective and, beginning in 2000, the normal retirement age increases, the number of retired workers as a percentage of the exposed population is gradually adjusted downward at each age 62 through 69, reaching an ultimate value, in 2030.

An additional adjustment to the projected number of retired worker beneficiaries was made during the long-range period to reflect projected changes in the number of other-than-legal aliens as a percentage of the population. This resulted in a downward adjustment in the percentage of the population that is receiving retired worker benefits starting in year 2004 and continuing until the end of the projection period. For the long-range period, the number of retired-worker beneficiaries who are converted from disabled-worker beneficiaries was calculated separately in a manner consistent with the calculation of disabled-worker beneficiaries.

The number of aged-spouse beneficiaries was estimated from the population projected by age and sex. The benefits of aged-spouse beneficiaries are based on the earnings records of their husbands or wives, who are referred to as "wage earners." In the short-range period, a regression equation was used to project the number of aged-spouse beneficiaries, as a proportion of the aged uninsured female or male population. In the long-range period, aged-spouse

beneficiaries were estimated from the population projected by age, sex, and marital status. To the number of spouses aged 62 and over in the population, a series of factors were applied, representing the probabilities that the spouse and the wage earner meet all of the conditions of eligibility—i.e., the probabilities that (1) the wage earner is 62 or over, (2) the wage earner is insured, (3) the wage earner is receiving benefits, (4) the spouse is not receiving a benefit for the care of an entitled child, (5) the spouse is not insured, (6) the spouse is not eligible to receive a significant government pension based on earnings in noncovered employment, and (7) a residual factor.

In addition, the same factors were applied to the number of divorced persons aged 62 and over in the population, with three differences. First, an additional factor is required to reflect the probability that the person's former wage-earner spouse is still alive (otherwise, the person may be entitled to a divorced widow(er)'s benefit). Second, a factor is required to reflect the probability that the marriage to the wage-earner spouse was at least 10 years in duration. Third, factor (3) was not applied because, effective for January 1985, a divorced person generally need not wait to receive benefits until the former wage-earner spouse is receiving benefits.

The projected numbers of children under age 18, and students aged 18, who are eligible for benefits as children of retired-worker beneficiaries, were based on the projected number of children in the population. In the short-range period, the number of entitled children was developed by applying award rates to the number of children in the population where both parents are alive, and by applying termination rates to the number of children already receiving benefits. In the long-range period, entitled children were projected separately by sex of the wage-earner parent. To the number of children in the population, factors were applied representing the probabilities that the parent is alive, aged 62 or over, insured, and receiving a retired-worker benefit. Another factor was applied representing the probability that the child is not entitled to a benefit based on the other parent's earnings. For children aged 18, a factor was applied representing the probability that the child is attending a secondary school.

The number of disabled children aged 18 and over of retired-worker beneficiaries was projected from the adult population. In the short-range period, award rates were applied to the uninsured population,

and termination rates were applied to the number of disabled children already receiving benefits. In the long-range period, disabled children were projected in a manner similar to that for children under 18, with the inclusion of a factor representing the probability of being disabled since childhood.

In the short-range period, the number of young-spouse beneficiaries was projected as a proportion of the projected number of child beneficiaries who are either under age 16 or disabled. In the long-range period, young-spouse beneficiaries were projected as a proportion of the projected number of child beneficiaries of retired workers, taking into account projected changes in average family size.

The number of aged-widow(er) beneficiaries was projected from the population by age and sex. In the short-range period, insured aged-widow(er) beneficiaries were projected concurrently with the retired-worker beneficiaries. A regression equation projected the number of uninsured aged-widow(er) beneficiaries, as a proportion of the uninsured aged female or male population not receiving any type of benefit. In the long-range period, aged-widow(er) beneficiaries were projected from the population by age, sex, and marital status. Four factors were applied to the number of widow(er)s in the population aged 60 and over. These factors represent the probabilities that (1) the deceased wage earner was fully insured at death, (2) the widow(er) is not receiving a benefit for the care of an entitled child, (3) the widow(er) is not fully insured, and (4) the widow(er)'s benefits are not withheld because of receipt of a significant government pension based on earnings in noncovered employment. In addition, some insured widow(er)s who had not applied for their retired-worker benefits are assumed to receive widow(er) benefits. Also, the same factors were applied to the number of divorced persons aged 60 and over in the population, with additional factors representing the probability that the person's former wage-earner spouse is deceased and that the marriage was at least 10 years in duration.

In the short-range period, the number of disabled-widow(er) beneficiaries was estimated as a proportion of the uninsured female or male population aged 50-64. In the long-range period, the number was projected for each age 50 through 64 as a percentage of the

widowed and divorced populations, adjusted for the insured status of the deceased spouse and the prevalence of disability.

The projected numbers of children under age 18, and students aged 18, who are eligible for benefits as survivors of deceased workers, were based on the projected number of children in the population whose mothers or fathers are deceased. In the short-range period, the number of entitled children was developed by applying award rates to the number of orphaned children, and by applying termination rates to the number of children already receiving benefits. In the long-range period, the number of child-survivor beneficiaries was projected in a manner analogous to that for child beneficiaries of retired workers, with the factor representing the probability that the parent is aged 62 or over being replaced by a factor that represented the probability that the parent is deceased.

In the short-range period, the numbers of mother-survivor and father-survivor beneficiaries were projected from the number of child-survivor beneficiaries who are either under age 16 or disabled. In the long-range period, mother-survivor and father-survivor beneficiaries were estimated from the number of child-survivor beneficiaries, taking into account projected changes in average family size.

The number of parent-survivor beneficiaries was projected based on the historical pattern of the number of such beneficiaries.

Table II.H2 shows the projected number of beneficiaries under the OASI program by type of benefit. Included among the beneficiaries who receive retired-worker benefits are some persons who also receive a residual benefit consisting of the excess of an auxiliary benefit over their retired-worker benefit. Estimates of the number of such residual payments were made separately for spouses and widow(er)s.

TABLE II.H2.—OASI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF DECEMBER 31 BY ALTERNATIVE, CALENDAR YEARS 1945-2070

[In thousands]

	Retired workers and auxiliaries			Survivors				
Calendar year	Worker	Wife-husband	Child	Widow-widower	Mother-father	Child	Parent	Total
Historical data:								
1945	518	159	13	94	121	377	6	1,288
1950	1,771	508	46	314	169	653	15	3,477
1955	4,474	1,192	122	701	292	1,154	25	7,961
1960	8,061	2,269	268	1,544	401	1,577	36	14,157
1965	11,101	2,614	461	2,371	472	2,074	35	19,128
1970	13,349	2,668	546	3,227	523	2,688	29	23,030
1975	16,588	2,867	643	3,889	582	2,919	21	27,509
1980	19,562	3,016	639	4,411	562	2,610	15	30,814
1985	22,432	3,069	457	4,863	372	1,917	10	33,120
1986	22,967	3,088	450	4,931	350	1,875	9	33,690
1987	23,440	3,090	440	4,984	329	1,836	8	34,126
1988	23,858	3,086	432	5,029	318	1,810	7	34,539
1989	24,327	3,093	423	5,071	312	1,780	6	35,012
1990	24,838	3,101	422	5,111	304	1,776	6	35,559
1991	25,289	3,104	426	5,158	301	1,791	5	36,074
1992	25,758	3,112	432	5,205	294	1,808	5	36,614
1993	26,104	3,094	436	5,224	289	1,837	5	36,990
1994	26,408	3,066	440	5,232	283	1,865	4	37,298
Intermediate:								
1995	26,661	3,055	450	5,291	286	1,900	4	37,648
2000	27,993	2,977	486	5,513	299	2,043	3	39,313
2005	29,813	2,852	555	5,645	295	2,118	3	41,280
2010	33,402	2,689	613	5,729	276	2,060	3	44,771
2015	39,436	2,479	685	5,828	264	1,987	3	50,681
2020	46,668	2,419	755	5,929	261	1,960	3	57,995
2025	53,311	2,429	800	6,026	264	1,962	3	64,796
2030	58,475	2,404	825	6,068	264	1,971	3	70,011
2035	61,531	2,354	843	6,076	262	1,973	3	73,042
2040	62,523	2,276	846	6,076	257	1,964	3	73,945
2045	63,184	2,257	852	6,106	253	1,948	3	74,602
2050	64,444	2,285	859	6,135	249	1,935	3	75,909
2055	66,542	2,381	880	6,165	247	1,921	3	78,139
2060	68,817	2,477	898	6,178	243	1,907	3	80,523
2065	70,604	2,546	908	6,215	240	1,890	3	82,407
2070	72,054	2,593	913	6,281	236	1,875	3	83,955
Low Cost:								
1995	26,646	3,054	450	5,289	286	1,898	4	37,628
2000	27,817	2,960	488	5,485	297	2,034	3	39,083
2005	29,365	2,782	557	5,622	290	2,171	3	40,789
2010	32,650	2,574	618	5,703	276	2,196	3	44,019
2015	38,333	2,326	698	5,811	264	2,216	3	49,652
2020	45,138	2,232	782	5,935	256	2,272	3	56,618
2025	51,327	2,209	846	6,047	259	2,354	3	63,043
2030	55,879	2,153	889	6,086	264	2,440	3	67,713
2035	58,324	2,081	929	6,061	268	2,510	3	70,176
2040	58,805	1,998	951	5,999	271	2,559	3	70,585
2045	59,152	1,973	981	5,958	275	2,608	3	70,950
2050	60,174	1,991	1,016	5,925	280	2,666	3	72,056
2055	62,105	2,061	1,066	5,921	288	2,730	3	74,174
2060	64,224	2,127	1,109	5,940	295	2,793	3	76,490
2065	66,078	2,179	1,144	6,011	300	2,852	3	78,568
2070	67,935	2,226	1,176	6,130	306	2,912	3	80,688

TABLE II.H2.—OASI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF DECEMBER 31 BY ALTERNATIVE, CALENDAR YEARS 1945-2070 (Cont.)

[In thousands]

	Retired workers and auxiliaries			Survivors				
Calendar year	Worker	Wife-husband	Child	Widow-widower	Mother-father	Child	Parent	Total
High Cost:								
1995	26,678	3,057	450	5,294	286	1,900	4	37,670
2000	28,170	2,996	485	5,546	300	2,050	3	39,549
2005	30,246	2,923	554	5,677	314	2,122	3	41,839
2010	34,106	2,812	609	5,769	290	1,993	3	45,581
2015	40,490	2,653	672	5,858	265	1,810	3	51,750
2020	48,185	2,641	730	5,928	252	1,688	3	59,428
2025	55,371	2,696	758	5,997	247	1,621	3	66,694
2030	61,337	2,729	765	6,024	240	1,579	3	72,676
2035	65,314	2,740	764	6,050	230	1,541	3	76,642
2040	67,225	2,710	749	6,098	219	1,502	3	78,506
2045	68,639	2,738	734	6,187	206	1,454	3	79,961
2050	70,577	2,816	719	6,263	195	1,405	3	81,977
2055	73,251	2,974	718	6,310	185	1,354	3	84,795
2060	76,057	3,136	717	6,293	175	1,304	3	87,685
2065	78,127	3,250	710	6,270	166	1,255	3	89,780
2070	79,486	3,312	699	6,262	157	1,208	3	91,128

Note: The number of beneficiaries does not include certain uninsured persons, most of whom both attained age 72 before 1968 and have fewer than 3 quarters of coverage, in which case the costs are reimbursed by the general fund of the Treasury. The number of such uninsured persons was 1,615 as of December 31, 1994, and is estimated to be fewer than 500 by the turn of the century. Totals do not necessarily equal the sums of rounded components.

7. Disability Insurance Beneficiaries

The number of DI beneficiaries was projected for each type of benefit separately, by the sex of the worker on whose earnings the benefits are based, and the age of the beneficiary. The number of disabled-worker beneficiaries was projected from the estimated number of such beneficiaries entitled on December 31, 1994, by adding new entitlements and subtracting terminations. The starting number of entitled disabled-worker beneficiaries was estimated by age, sex, and duration of entitlement, from the tabulated number of disabled-worker beneficiaries in current-payment status on December 31, 1994. The number of new entitlements during each year was projected by applying assumed disability incidence rates. Incidence rates by age and sex were applied to the projected disability insured population (excluding those already entitled to disabled-worker benefits) to obtain new entitlements.

The number of terminations was projected by applying assumed termination rates to the disabled-worker population. In the short-range period, the number of terminations was projected by applying assumed termination rates by reason—death, recovery, and all oth-

er—and by age and sex, to the entitled disabled-worker population. In the long-range period, the number of terminations was projected by applying assumed death rates and recovery rates, by age, sex, and duration of entitlement, to the entitled disabled-worker population. This number of terminations was then increased, in both the short-range and long-range periods, by the number of disabled-worker beneficiaries who would be automatically converted to retired-worker beneficiaries upon attainment of the normal retirement age (currently, age 65).

Disability incidence rates declined rapidly from historically high levels for 1974-75 to a level about half as large by the year 1982. From 1982 through 1986, incidence rates increased steadily, regaining about one-fifth of the decline from the prior period. Between 1986 and 1989, incidence rates remained fairly steady. From 1989 to 1992, incidence rates again increased at a rapid pace, reaching a level about 90 percent of the way back to the rates of 1974-75, from the rates for 1982. From 1992 to 1994 incidence rates again decreased, and the 1994 incidence rate was only 59 percent of the way back up from the 1982 levels to the 1974-75 levels.

Assumed future levels for disability incidence rates are determined in two stages: (1) rates are first projected from recent levels based on past trends and future expectations, as if the increases scheduled in present law for the normal retirement age (NRA) would not occur, and (2) for the year 2000 and later an adjustment is made to reflect the scheduled increase in the NRA; rates for persons aged 60 through 64 are assumed to increase, and rates for ages 65 and 66 are extrapolated.

For the alternative II assumptions, gross incidence rates are projected to continue increasing over the next 10 years due to the growing proportion of insured workers at the higher ages. Gross rates projected under the first stage increase from 1994 levels by about 15 percent over the next 10 years, reaching a level of about 6.1 per thousand persons exposed (defined as the number of persons who are disability insured and not currently entitled to disabled worker benefits).

Further increases in incidence rates over age 60, along with rates assumed for persons aged 66 and 67 due to the scheduled increase in the NRA, are reflected in the second stage for years 2000 and

later. These adjustments contribute to the overall rise in the gross disability incidence rate from a level of 5.2 per thousand exposed for 1994 to an ultimate rate of 7.3 per thousand exposed by the year 2027, at which time the scheduled increase in the NRA will be complete.

For alternative I, the gross disability incidence rate is assumed to decline by about 19 percent over the next 10 years. The 2027 gross incidence rate is assumed to be 5.8 per thousand exposed. For alternative III, the gross disability incidence rate is assumed to increase by about 18 percent over the next 10 years, to a level comparable to the peak experience for 1974-75. The gross incidence rate under alternative III is assumed to reach about 8.7 per thousand exposed by 2027.

In the short-range period, the termination rates were projected by reason—death, recovery, and all other—and by age and sex. For alternative II, the death rates were projected to remain constant, while the rates for recovery were projected to increase from the relatively low levels of 1994 by about 35 percent in 1995 and 1996, and to gradually increase thereafter to roughly 65 percent above the 1994 levels by the end of the short-range period. Termination rates due to all other reasons (except conversion to old-age benefits) are projected to exhibit moderate, then more rapid, increases as the DI program begins to experience the effects of the drug addiction and alcoholism provisions of the Social Security Independence and Program Improvements Act of 1994. These rates are expected to exhibit significant volatility among age groups; they settle at roughly 90 percent above the 1994 levels, aggregated over all ages. For alternative III, the death rates decline by about 10 percent, while the rates for recovery and all other terminations increase more slowly and to lower levels. For alternative I, the death rates increase by about 10 percent, while the rates for recovery and all other terminations increase more quickly and to higher levels.

In the long-range period, the death rates and recovery rates were projected by age, sex, and duration of entitlement. For alternative II, death rates reach levels in 2069 approximately 33 percent lower for males and approximately 26 percent lower for females than those experienced by disabled-worker beneficiaries during 1977-80, the most recent period for which detailed data are available. The recovery rates are assumed to increase from 1994 levels until 2009, when they

attain ultimate levels about 50 percent lower than those experienced during the period 1977-80. Projected increases in recovery rates reflect the estimated effect of the periodic reviews required by provisions of law first enacted in 1980, and amended in 1983, 1984, and 1990.

For alternative I, the death rates in 2069 are assumed to be roughly 16 percent lower for males and approximately 6 percent lower for females than those experienced by disabled-worker beneficiaries during 1977-80. Recovery rates are assumed to increase from current levels to levels that are about six times the 1994 level and about four and one-half times the 1995 level for both males and females. These ultimate recovery rates are 40 percent lower than those of the 1977-80 base period. For alternative III, the death rates in 2069 are assumed to be about 48 percent lower for males and 46 percent lower for females than those experienced during 1977-80, and recovery rates are assumed to be 60 percent lower than those experienced during 1977-80.

In the short-range period, the projected numbers of children under age 18, students aged 18, and disabled children aged 18 and over, who are eligible for benefits as children of disabled-worker beneficiaries, were projected by applying quarterly award and termination rates. Awards to the three categories of child beneficiaries were based on the number of awards to disabled-worker beneficiaries.

In the long-range period, the projected numbers of minor child and student beneficiaries were based on the projected number of children in the population by age. To the number of children were applied factors representing the probability that either of their parents is insured and disabled. The number of disabled children aged 18 and over was projected as a function of the number of disabled-worker beneficiaries and the size of the adult population.

In the short-range period, the number of young-spouse beneficiaries was projected by applying quarterly award and termination rates, where awards were based on the number of awards to child beneficiaries who are either under age 16 or disabled. The number of aged-spouse beneficiaries was also projected by applying quarterly award and termination rates, where awards were based on the number of awards to disabled-worker beneficiaries.

In the long-range period, the number of young-spouse beneficiaries

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was projected as a proportion of the projected number of child beneficiaries who are either under age 16 or disabled, taking into account projected changes in family size. The number of aged-spouse beneficiaries was projected as a proportion of the number of disabled-worker beneficiaries, based on recent experience and allowing for projected changes in marriage rates.

Table II.H3 shows the projected number of beneficiaries under the DI program by type of benefit.

TABLE II.H3.—DI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF DECEMBER 31 BY ALTERNATIVE, CALENDAR YEARS 1960-2070

[In thousands]

Calendar year	Disabled worker	Auxiliaries		Total
		Wife-husband	Child	
Historical data:				
1960	455	77	155	687
1965	988	193	558	1,739
1970	1,493	283	889	2,665
1975	2,489	453	1,411	4,352
1980	2,859	462	1,358	4,678
1985	2,656	306	945	3,907
1986	2,727	301	965	3,993
1987	2,786	291	968	4,045
1988	2,830	281	963	4,074
1989	2,895	271	962	4,129
1990	3,011	266	989	4,266
1991	3,195	266	1,052	4,513
1992	3,468	271	1,151	4,890
1993	3,726	273	1,255	5,254
1994	3,963	271	1,350	5,584
Intermediate:				
1995	4,228	274	1,424	5,926
2000	5,446	287	1,684	7,417
2005	6,729	313	1,901	8,943
2010	7,894	328	1,914	10,136
2015	8,511	321	1,847	10,679
2020	8,767	324	1,801	10,893
2025	9,128	350	1,806	11,284
2030	9,075	352	1,833	11,259
2035	9,017	348	1,860	11,225
2040	9,166	345	1,882	11,393
2045	9,653	358	1,899	11,911
2050	9,940	366	1,915	12,222
2055	10,144	378	1,935	12,457
2060	10,098	378	1,953	12,429
2065	10,129	378	1,969	12,477
2070	10,268	382	1,983	12,633

TABLE II.H3.—DI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF DECEMBER 31 BY ALTERNATIVE, CALENDAR YEARS 1960-2070 (Cont.)

[In thousands]

Calendar year	Disabled worker	Auxiliaries: Wife-husband	Auxiliaries: Child	Total
Low Cost:				
1995	4,176	270	1,406	5,852
2000	4,986	263	1,554	6,802
2005	5,985	268	1,711	7,965
2010	6,674	259	1,657	8,590
2015	6,984	236	1,585	8,805
2020	7,073	223	1,557	8,853
2025	7,298	232	1,590	9,120
2030	7,239	229	1,650	9,117
2035	7,205	225	1,710	9,140
2040	7,352	224	1,762	9,338
2045	7,776	234	1,818	9,829
2050	8,076	242	1,882	10,200
2055	8,352	253	1,954	10,559
2060	8,496	258	2,025	10,779
2065	8,753	265	2,094	11,112
2070	9,103	273	2,162	11,538
High Cost:				
1995	4,289	278	1,447	6,014
2000	6,072	324	1,871	8,266
2005	7,448	366	2,086	9,900
2010	9,088	415	2,159	11,661
2015	10,034	430	2,081	12,546
2020	10,485	453	1,998	12,936
2025	11,010	494	1,956	13,460
2030	10,993	499	1,931	13,424
2035	10,937	493	1,913	13,343
2040	11,098	485	1,900	13,483
2045	11,646	497	1,872	14,015
2050	11,892	501	1,835	14,228
2055	11,970	509	1,800	14,279
2060	11,643	499	1,764	13,906
2065	11,335	485	1,728	13,548
2070	11,159	476	1,694	13,329

Note: Totals do not necessarily equal the sums of rounded components.

8. Average Benefits

Average benefits were projected by type of benefit based on recent historical averages, projected average Primary Insurance Amounts (PIAs), and projected ratios of average benefits to average PIAs. Average PIAs were calculated from projected distributions of beneficiaries by duration from year of award, average awarded PIAs, and increases thereto since the year of award, reflecting automatic benefit increases, recomputations to reflect additional covered earnings, and other factors. Average awarded PIAs were calculated from projected earnings histories, which were developed from the actual earnings histories associated with a sample of awards made in 1993. The 1993 sample replaced a 1992 sample, which was used for the 1994 report. This change had a significant effect on the projected

level of average benefits as discussed earlier in section II.F2.

For several types of benefits—retired-worker, aged-spouse, and aged-widow(er) benefits—the percentage of the PIA that is payable depends on the age at initial entitlement to benefits. Projected ratios of average benefits to average PIAs for these types of benefits were based on projections of age distributions at initial entitlement.

9. Benefit Payments

For each type of benefit, benefit payments were calculated as the product of a number of beneficiaries and a corresponding average monthly benefit. In the short-range period, benefit payments were calculated on a quarterly basis. In the long-range period, all benefit payments were calculated on an annual basis, using the number of beneficiaries on December 31. These amounts were adjusted to include retroactive payments to newly awarded beneficiaries, and other amounts not reflected in the regular monthly benefit payments.

Lump-sum death payments were calculated as the product of (1) the number of such payments, which was projected on the basis of the assumed death rates, the projected fully insured population, and the estimated percentage of the fully insured population that would qualify for benefits, and (2) the amount of the lump-sum death payment, which is $255 (not indexed in future years).

10. Administrative Expenses

The projection of administrative expenses through 2004 was based on assumed increases in average wages, increases in the CPI, and increases in the number of beneficiaries. For years after 2004, administrative expenses are assumed to increase because of increases in the number of beneficiaries and increases in the average wage which will more than offset assumed improvements in administrative productivity.

11. Railroad Retirement Financial Interchange

Railroad workers are covered under a separate multi-tiered plan, the first tier being very similar to OASDI coverage. An annual financial interchange between the Railroad Retirement fund and the OASI and DI funds is made reflecting the difference between (1) the amount

of OASDI benefits that would be paid to railroad workers and their families if railroad employment had been covered under the OASDI program and (2) the amount of OASDI payroll tax that would be received from railroad workers if they were covered directly under the OASDI program.

The effect of the financial interchange with the Railroad Retirement program was evaluated on the basis of trends similar to those used in estimating the cost of OASDI benefits. The resulting effect was annual short-range costs of about $3-5 billion and a long-range summarized cost of 0.05 percent of taxable payroll to the OASDI program.

12. Benefits to Uninsured Persons

The law provides for special monthly cash payments to certain uninsured persons who attained age 72 before 1968 or who have 3 quarters of coverage for each year after 1966 and before the year of attainment of age 72. The number of such uninsured persons was projected based on an extrapolation of the historical survival rate of the members of that group. The benefit payable to these uninsured persons is a fixed amount which increases by the percentage benefit increase applicable to regular OASDI benefits. These payments are made from the OASI Trust Fund, which is then reimbursed from the general fund of the Treasury for the costs (including administrative expenses and interest) associated with providing payments to those persons with fewer than 3 quarters of coverage. The nonreimbursable payments are assumed to be insignificant after 2000. Neither the reimbursable payments nor the associated reimbursements are reflected in the cost rates or the income rates. These amounts are reflected, however, in tables which show trust fund operations.

13. Military-Service Transfers

As a result of the 1983 amendments, the OASI and DI Trust Funds received lump-sum payments, in May 1983, for the cost (including administrative expenses) of providing additional benefit payments resulting from noncontributory wage credits for military service performed prior to 1957. Adjustments to the payments were made in 1985 and 1990, and additional adjustments will be made in 1995 and every fifth year thereafter. The adjustments for 1995 were estimated based on the change in interest rates since the determination of the

adjustments in 1990. No adjustments after 1995 would be due unless actual interest rates are different from those assumed, or changes are made in the methods used to determine the military-service transfers.

14. Income From Taxation of Benefits

Under present law, the OASI and DI Trust Funds are credited with the additional income taxes attributable to the taxation of the first 50 percent of OASDI benefit payments. (The remainder of the income taxes attributable to the taxation of up to 85 percent of OASDI benefit payments is credited to the HI Trust Fund.) For the short-range period, income to the trust funds from such taxation was estimated by applying the following two factors to total OASI and DI benefit payments: (1) the percentage of benefit payments (limited to 50 percent) that is taxable, and (2) the average tax rate applicable to those benefits. For the long-range period, income to the trust funds from such taxation was estimated by applying projected ratios of such income to total OASI and DI benefit payments. Because the income thresholds used for benefit taxation are, by law, constant in the future, their values in relation to future income and benefit levels will decline. Thus, ratios of income from taxation of benefits to the amount of benefits are projected to increase. These ratios were projected reflecting the results of a model developed by the Office of Tax Analysis, Department of the Treasury, relating OASDI benefit payments to total personal income for a sample of recent tax returns.

III. APPENDICES

A. ACTUARIAL ESTIMATES FOR THE OASDI AND HI PROGRAMS, COMBINED

In this appendix, long-range actuarial estimates for the OASDI and Hospital Insurance (HI) programs are combined to facilitate analysis of the adequacy of the combined income and assets of the trust funds relative to their combined expenditures. Combining cost and income rates as percentages of taxable payroll requires a note of caution. The taxable payrolls for the HI program are larger than those estimated for the OASDI program because (1) a larger maximum taxable amount was established for the HI program in 1991, with the maximum being eliminated altogether for the HI program in 1994, (2) a larger proportion of Federal, State, and local government employees have their wages covered under the HI program, and (3) the earnings of railroad workers are included in the HI taxable payroll but not in the OASDI taxable payroll (railroad contributions for the equivalent of OASDI benefits are accounted for on a net interchange that occurs annually between the OASDI and Railroad Retirement programs). As a result, the HI taxable payroll is about 20 percent larger than the OASDI taxable payroll throughout the long-range period. Nonetheless, combined OASDI and HI rates shown in this appendix are computed by adding the separately derived rates for the programs. The resulting combined rates may be interpreted as those applicable to the taxable payroll in the amount of the OASDI payroll, with the separate HI rates being additionally applicable to the excess of the HI payroll over the OASDI payroll.

Long-range estimates are subject to much uncertainty and should not be considered precise forecasts. Instead they should be considered as indicative of the general trend and range of costs that could reasonably be expected to occur. The emphasis in this appendix on combined operations, while significant, should not obscure the analysis of the financial status of the individual trust funds, which are legally separate and cannot be commingled. In addition, the factors which determine the costs of the OASI, DI, and HI programs differ substantially.

As with the OASI and DI Trust Funds, income to the HI Trust Fund comes primarily from contributions paid by employees, employers, and self-employed persons. The combined OASDI and HI contribution

rate for employees and their employers is often referred to as the FICA tax, because it is authorized by the Federal Insurance Contributions Act. Contribution rates for the OASDI and HI programs are shown in table III.A1.

TABLE III.A1.—CONTRIBUTION RATES FOR THE OASDI AND HI PROGRAMS

[In percent]

Calendar years	Employees and employers, each			Self employed		
	OASDI	HI	Combined	OASDI	HI	Combined
1966	3.85	0.35	4.20	5.80	0.35	6.15
1967	3.90	.50	4.40	5.90	.50	6.40
1968	3.80	.60	4.40	5.80	.60	6.40
1969-70	4.20	.60	4.80	6.30	.60	6.90
1971-72	4.60	.60	5.20	6.90	.60	7.50
1973	4.85	1.00	5.85	7.00	1.00	8.00
1974-77	4.95	.90	5.85	7.00	.90	7.90
1978	5.05	1.00	6.05	7.10	1.00	8.10
1979-80	5.08	1.05	6.13	7.05	1.05	8.10
1981	5.35	1.30	6.65	8.00	1.30	9.30
1982-83	5.40	1.30	6.70	8.05	1.30	9.35
1984[1]	5.70	1.30	7.00	11.40	2.60	14.00
1985[1]	5.70	1.35	7.05	11.40	2.70	14.10
1986-87[1]	5.70	1.45	7.15	11.40	2.90	14.30
1988-89[1]	6.06	1.45	7.51	12.12	2.90	15.02
1990 and later	6.20	1.45	7.65	12.40	2.90	15.30

[1]See footnote 1 under table II.B1 in the section entitled "Description of the Trust Funds" for a description of tax credits allowed against the combined OASDI and HI taxes on net earnings from self-employment in 1984-89.

Table III.A2 shows estimated annual income rates and cost rates for the OASDI program, the HI program, and the combined OASDI and HI programs, based on the low cost, intermediate, and high cost sets of assumptions (alternatives I, II, and III) described earlier in this report. These annual rates are intended to indicate the cash-flow operation of the programs. Therefore, income rates exclude interest earned on trust fund assets and cost rates exclude the cost of accumulating or maintaining target trust fund balances. Table III.A2 also shows the difference between income rates and cost rates, called balances. Estimates shown for the combined trust funds are theoretical because no authority currently exists for transferring assets from one trust fund to another.

Under all three sets of assumptions, combined OASDI and HI cost rates are projected to rise above current levels, with the sharpest increase occurring during the period 2010-2030. Under the high cost set of assumptions, alternative III, annual deficits are projected to occur within the next 3 years, and to continue for the remainder of

the 75-year projection period. Cost rates are projected to rise to over three times their current level by the end of the projection period. Under the intermediate assumptions, alternative II, annual deficits begin in the year 2002, with cost rates almost doubling by the end of the projection period. Under the low cost assumptions, alternative I, cost rates are projected to increase by about 25 percent, with annual deficits beginning by the year 2020.

TABLE III.A2.—COMPARISON OF ESTIMATED INCOME RATES AND COST RATES[1] FOR OASDI AND HI BY ALTERNATIVE, CALENDAR YEARS 1995-2070

[As a percentage of taxable payroll[1]]

Calendar year	OASDI			HI			Combined		
	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
Intermediate:									
1995....	12.58	11.49	1.09	3.01	3.26	−0.25	15.59	14.75	0.84
1996....	12.62	11.52	1.10	3.01	3.38	−.37	15.63	14.90	.73
1997....	12.62	11.54	1.08	3.01	3.47	−.46	15.63	15.01	.62
1998....	12.63	11.59	1.03	3.01	3.57	−.56	15.64	15.17	.47
1999....	12.63	11.66	.97	3.01	3.68	−.66	15.65	15.34	.31
2000....	12.64	11.73	.91	3.02	3.77	−.76	15.66	15.51	.15
2001....	12.65	11.78	.87	3.02	3.87	−.85	15.66	15.64	.02
2002....	12.65	11.82	.83	3.02	3.95	−.93	15.67	15.77	−.10
2003....	12.66	11.86	.79	3.02	4.03	−1.01	15.68	15.89	−.21
2004....	12.66	11.90	.76	3.02	4.10	−1.08	15.69	16.00	−.32
2005....	12.67	11.92	.75	3.04	4.17	−1.13	15.71	16.09	−.39
2010....	12.71	12.29	.42	3.10	4.57	−1.46	15.81	16.85	−1.04
2015....	12.77	13.40	−.63	3.19	5.15	−1.97	15.95	18.55	−2.60
2020....	12.88	14.97	−2.09	3.23	5.87	−2.64	16.11	20.84	−4.73
2025....	12.99	16.39	−3.40	3.28	6.70	−3.43	16.27	23.09	−6.82
2030....	13.08	17.26	−4.19	3.31	7.52	−4.21	16.39	24.79	−8.40
2035....	13.13	17.57	−4.44	3.33	8.13	−4.80	16.46	25.70	−9.24
2040....	13.16	17.48	−4.32	3.34	8.52	−5.19	16.50	26.00	−9.51
2045....	13.18	17.47	−4.29	3.34	8.78	−5.44	16.53	26.26	−9.73
2050....	13.21	17.66	−4.45	3.35	8.97	−5.62	16.56	26.63	−10.07
2055....	13.25	18.07	−4.82	3.37	9.18	−5.81	16.62	27.25	−10.63
2060....	13.28	18.49	−5.20	3.39	9.47	−6.08	16.67	27.95	−11.28
2065....	13.31	18.79	−5.48	3.40	9.80	−6.40	16.71	28.59	−11.88
2070....	13.33	19.04	−5.71	3.41	10.18	−6.77	16.74	29.22	−12.48

TABLE III.A2.—COMPARISON OF ESTIMATED INCOME RATES AND COST RATES[1] FOR OASDI AND HI BY ALTERNATIVE, CALENDAR YEARS 1995-2070 (Cont.)

[As a percentage of taxable payroll[1]]

Calendar year	OASDI			HI			Combined		
	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
Low Cost:									
1995....	12.56	11.35	1.21	3.01	3.23	−0.22	15.57	14.58	0.99
1996....	12.61	11.18	1.43	3.01	3.29	−.28	15.62	14.47	1.15
1997....	12.61	11.04	1.58	3.01	3.32	−.31	15.62	14.36	1.26
1998....	12.62	10.91	1.70	3.01	3.36	−.36	15.62	14.27	1.35
1999....	12.62	10.81	1.81	3.01	3.40	−.39	15.63	14.21	1.41
2000....	12.62	10.72	1.90	3.01	3.44	−.43	15.63	14.16	1.47
2001....	12.62	10.65	1.98	3.01	3.47	−.46	15.63	14.12	1.52
2002....	12.63	10.59	2.04	3.01	3.49	−.48	15.64	14.08	1.56
2003....	12.63	10.52	2.11	3.01	3.51	−.50	15.64	14.03	1.61
2004....	12.63	10.46	2.17	3.01	3.52	−.51	15.64	13.99	1.66
2005....	12.64	10.44	2.20	3.02	3.53	−.51	15.66	13.97	1.69
2010....	12.66	10.56	2.10	3.08	3.57	−.49	15.74	14.13	1.61
2015....	12.71	11.47	1.24	3.15	3.73	−.58	15.86	15.20	.66
2020....	12.80	12.71	.09	3.19	3.91	−.72	15.99	16.62	−.63
2025....	12.88	13.73	−.85	3.22	4.09	−.87	16.11	17.82	−1.72
2030....	12.94	14.20	−1.26	3.24	4.29	−1.04	16.19	18.49	−2.30
2035....	12.98	14.14	−1.16	3.25	4.43	−1.18	16.23	18.57	−2.34
2040....	12.99	13.71	−.72	3.25	4.52	−1.27	16.23	18.23	−2.00
2045....	12.99	13.36	−.37	3.24	4.64	−1.40	16.23	18.00	−1.77
2050....	13.00	13.19	−.19	3.24	4.74	−1.50	16.24	17.93	−1.69
2055....	13.01	13.19	−.18	3.25	4.85	−1.61	16.26	18.04	−1.78
2060....	13.02	13.19	−.16	3.25	5.00	−1.75	16.28	18.19	−1.91
2065....	13.03	13.13	−.10	3.25	5.18	−1.93	16.28	18.31	−2.03
2070....	13.04	13.09	−.05	3.26	5.38	−2.13	16.29	18.47	−2.18
High Cost:									
1995....	12.61	11.60	1.01	3.01	3.28	−.28	15.61	14.88	.73
1996....	12.63	11.97	.65	3.01	3.49	−.47	15.64	15.46	.18
1997....	12.63	12.04	.59	3.01	3.63	−.61	15.65	15.66	−.02
1998....	12.64	12.19	.45	3.02	3.75	−.73	15.66	15.94	−.28
1999....	12.66	12.84	−.18	3.02	3.97	−.94	15.68	16.80	−1.12
2000....	12.67	13.04	−.38	3.03	4.14	−1.11	15.69	17.18	−1.48
2001....	12.67	13.15	−.48	3.03	4.29	−1.26	15.70	17.44	−1.74
2002....	12.68	13.28	−.60	3.03	4.44	−1.41	15.71	17.72	−2.01
2003....	12.69	13.42	−.74	3.04	4.61	−1.57	15.72	18.03	−2.31
2004....	12.69	13.57	−.87	3.04	4.76	−1.72	15.73	18.33	−2.60
2005....	12.71	13.63	−.92	3.05	4.92	−1.87	15.76	18.55	−2.79
2010....	12.77	14.20	−1.43	3.13	5.85	−2.71	15.90	20.04	−4.14
2015....	12.85	15.44	−2.60	3.23	7.17	−3.95	16.07	22.62	−6.54
2020....	12.99	17.36	−4.37	3.28	8.93	−5.65	16.27	26.29	−10.02
2025....	13.12	19.25	−6.13	3.34	11.15	−7.81	16.46	30.40	−13.94
2030....	13.24	20.70	−7.46	3.39	13.38	−9.99	16.63	34.09	−17.46
2035....	13.33	21.64	−8.31	3.43	15.13	−11.70	16.76	36.76	−20.01
2040....	13.39	22.21	−8.82	3.45	16.23	−12.78	16.84	38.44	−21.60
2045....	13.45	22.90	−9.46	3.48	16.86	−13.38	16.92	39.76	−22.84
2050....	13.51	23.84	−10.33	3.51	17.23	−13.72	17.02	41.07	−24.05
2055....	13.59	25.10	−11.51	3.55	17.63	−14.08	17.14	42.73	−25.59
2060....	13.67	26.39	−12.72	3.59	18.17	−14.57	17.27	44.56	−27.29
2065....	13.75	27.53	−13.79	3.63	18.83	−15.20	17.38	46.36	−28.99
2070....	13.81	28.54	−14.73	3.66	19.55	−15.89	17.47	48.09	−30.62

[1]The taxable payroll for HI is significantly larger than the taxable payroll for OASDI because the HI taxable maximum amount was eliminated beginning 1994, and because HI covers all Federal civilian employees, including those hired before 1984, all State and local government employees hired after April 1, 1986, and railroad employees. Combined OASDI and HI rates as a percent of taxable payroll are computed as the sum of the rates for the separate programs.

Notes:

1. The income rate excludes interest income and certain transfers from the general fund of the Treasury.
2. Totals do not necessarily equal the sums of rounded components.

Tables III.A3 and III.A4 show the estimates of summarized OASDI and HI income rates, cost rates and balances for various time periods, based on all three sets of assumptions. In table III.A3 values are summarized over the three 25-year subperiods (excluding the beginning fund balances and the cost of accumulating ending fund targets). In table III.A4 values are summarized over the 25-year, 50-year, and 75-year valuation periods (for which beginning fund balances are included in the summarized income rates, and the costs of accumulating an ending fund balance equal to 100 percent of annual expenditures by the end of the period are included in the summarized cost rates). Estimates shown for the combined trust funds are theoretical because no authority currently exists for transferring assets from one trust fund to another.

TABLE III.A3.—COMPARISON OF SUMMARIZED INCOME RATES AND COST RATES[1] FOR 25-YEAR SUBPERIODS[2], FOR OASDI AND HI BY ALTERNATIVE, CALENDAR YEARS 1995-2069

[As a percentage of taxable payroll[1]]

	OASDI			HI			Combined		
Subperiod	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
Intermediate:									
1995-2019	12.68	12.38	0.31	3.08	4.33	−1.25	15.76	16.70	−0.94
2020-2044	13.06	16.95	−3.89	3.30	7.52	−4.22	16.36	24.47	−8.11
2045-2069	13.25	18.22	−4.98	3.37	9.32	−5.94	16.62	27.54	−10.92
Low Cost:									
1995-2019	12.64	10.99	1.65	3.06	3.54	−.48	15.71	14.53	1.18
2020-2044	12.92	13.80	−.88	3.23	4.29	−1.06	16.16	18.09	−1.93
2045-2069	13.00	13.22	−.22	3.25	4.93	−1.68	16.25	18.15	−1.90
High Cost:									
1995-2019	12.73	13.91	−1.18	3.10	5.37	−2.26	15.83	19.27	−3.44
2020-2044	13.23	20.63	−7.40	3.39	13.43	−10.04	16.62	34.06	−17.44
2045-2069	13.60	25.49	−11.89	3.56	17.88	−14.32	17.16	43.37	−26.21

[1]The taxable payroll for HI is significantly larger than the taxable payroll for OASDI because the HI taxable maximum amount was eliminated beginning 1994, and because HI covers all Federal civilian employees, including those hired before 1984, all State and local government employees hired after April 1, 1986, and railroad employees. Combined OASDI and HI rates are computed as the sum of the separately derived rates for each program.

[2]For 25-year subperiods, income rates do not include beginning trust fund balances and cost rates do not include the cost of reaching ending fund targets.

Note: Totals do not necessarily equal the sums of rounded components.

Under the high cost alternative III, the combined OASDI and HI system is projected to experience large deficits during the 25-year, 50-year, and 75-year valuation periods (including beginning trust fund balances and the cost of ending fund targets). Deficits are projected to occur during each 25-year subperiod of the 75-year pro-

jection period (excluding beginning trust fund balances and the cost of ending fund targets). Under intermediate alternative II assumptions, deficits of smaller magnitude than those for the high cost alternative III are projected to occur for each of the three 25-year subperiods and for each of the three valuation periods. Under the low cost alternative I, the combined OASDI and HI system is projected to show positive balances for the first 25-year subperiod and the 25-year valuation period, and a small positive balance for the 50-year valuation period. Relatively small deficits are projected for the 75-year valuation period and for the second and third 25-year subperiods.

TABLE III.A4.—COMPARISON OF SUMMARIZED INCOME RATES AND COST RATES[1] FOR VALUATION PERIODS[2], FOR OASDI AND HI BY ALTERNATIVE, CALENDAR YEARS 1995-2069

[As a percentage of taxable payroll[1]]

Valuation period	OASDI			HI			Combined		
	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
Intermediate:									
25-years: 1995-2019 . .	13.44	12.91	0.54	3.27	4.54	−1.26	16.72	17.44	−0.73
50-years: 1995-2044 . .	13.28	14.61	−1.33	3.29	5.84	−2.55	16.56	20.45	−3.88
75-years: 1995-2069 . .	13.27	15.44	−2.17	3.31	6.67	−3.37	16.58	22.12	−5.54
Low Cost:									
25-years: 1995-2019 . .	13.37	11.44	1.93	3.25	3.68	−.43	16.61	15.12	1.49
50-years: 1995-2044 . .	13.17	12.42	.75	3.24	3.94	−.70	16.42	16.36	.06
75-years: 1995-2069 . .	13.13	12.59	.54	3.24	4.19	−.95	16.37	16.78	−.41
High Cost:									
25-years: 1995-2019 . .	13.51	14.53	−1.01	3.30	5.69	−2.39	16.81	20.22	−3.40
50-years: 1995-2044 . .	13.39	17.16	−3.77	3.34	9.13	−5.80	16.73	26.30	−9.57
75-years: 1995-2069 . .	13.44	19.11	−5.67	3.39	11.20	−7.80	16.83	30.31	−13.47

[1]The taxable payroll for HI is significantly larger than the taxable payroll for OASDI because the HI taxable maximum amount was eliminated beginning 1994, and because HI covers all Federal civilian employees, including those hired before 1984, all State and local government employees hired after April 1, 1986, and railroad employees. Combined OASDI and HI rates are computed as the sum of the separately derived rates for each program.

[2]For valuation periods, income rates include beginning trust fund balances and cost rates include an ending fund target equal to 100 percent of annual expenditures by the end of the period.

Note: Totals do not necessarily equal the sums of rounded components.

B. LONG-RANGE ESTIMATES OF SOCIAL SECURITY TRUST FUND OPERATIONS IN DOLLARS

This appendix presents long-range projections in dollars of the operations of the combined OASI and DI Trust Funds and in some cases the HI Trust Fund. It provides the means to track the progress of the funds during the projection period. Meaningful comparison of current dollar values over long periods of time can be difficult because of the tendency toward inflation. Some means of removing inflation is thus generally desirable. Several economic series, or "indices," are provided to allow current dollars to be adjusted for changes in prices, wages, and certain other aspects of economic growth during the projection period.

The selection of a particular index for adjustment of current dollars depends upon the analyst's decision as to which index provides the most useful standard for adjusting dollar amounts, over time, to create values that are appropriately comparable. Table III.B1 presents five such indices for adjustment.

One of the most common forms of standardization is based on some measure of change in the prices of consumer goods. One such price index is the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W, hereafter referred to as "CPI"), which is published by the Bureau of Labor Statistics, Department of Labor. This is the index used to determine annual increases in OASDI monthly benefits payable after the year of initial eligibility. The CPI is assumed to increase ultimately at annual rates of 3.0, 4.0, and 5.0 percent for the low cost, intermediate, and high cost sets of assumptions (alternatives I, II, and III, respectively). Constant-dollar values (those adjusted by the CPI) are provided in table III.B2.

Another type of standardization combines the effects of price inflation with real-wage growth. The wage index presented here is the "SSA average wage index," as defined in section 215(i)(1)(G) of the Social Security Act. This index is used to make annual adjustments to many earnings-related quantities embodied in the Social Security Act, such as the contribution and benefit base. The average annual wage is assumed to increase ultimately by 4.5, 5.0, and 5.5 percent under the low cost, intermediate, and high cost alternatives (I, II, and III), respectively.

The taxable payroll index adjusts for the effects of changes in the

number of workers and changes in the proportion of earnings that are taxable, as well as for the effects of price inflation and real-wage growth. The OASDI taxable payroll consists of all earnings subject to OASDI taxation, adjusted for the lower effective tax rate on multiple-employer "excess wages," and including deemed wage credits for military service.

The gross domestic product (GDP) index adjusts for the growth in the aggregate amount of goods and services produced in the United States. Values adjusted by GDP (see appendix III.C) indicate their relative share of the total output of the economy. No explicit assumptions are made about growth in taxable payroll or GDP. These series are computed reflecting the other more basic economic and demographic assumptions, as discussed in section II.H.

Discounting with interest is another way of adjusting current dollars. The series of interest-rate factors included here is based on the average of the assumed annual interest rates for special public-debt obligations issuable to the trust funds. This series is slightly different from the interest rates used to create summarized values elsewhere in this report, where the actual yield on currently held trust fund assets is used for each year. Ultimate nominal interest rates compounded semiannually, are assumed to be approximately 6.0, 6.3, and 6.5 percent for the low cost, intermediate, and high cost alternatives (I, II, and III), respectively.

TABLE III.B1.—SELECTED ECONOMIC VARIABLES BY ALTERNATIVE, CALENDAR YEARS 1994-2070

[GDP and taxable payroll in billions]

Calendar year	Adjusted CPI[1]	SSA average wage index[2]	Taxable payroll[3]	Gross domestic product	Compound interest-rate factor[4]
Intermediate:					
1994	97.04	$23,899.66	$2,814	$6,737	0.9330
1995	100.00	24,825.27	2,960	7,116	1.0000
1996	103.20	25,815.16	3,103	7,492	1.0787
1997	106.58	26,895.37	3,257	7,876	1.1620
1998	110.22	27,972.95	3,412	8,269	1.2516
1999	114.02	29,117.32	3,576	8,686	1.3461
2000	118.21	30,384.43	3,755	9,143	1.4449
2001	122.81	31,773.20	3,952	9,656	1.5489
2002	127.73	33,268.75	4,170	10,217	1.6591
2003	132.84	34,878.30	4,403	10,817	1.7749
2004	138.15	36,604.04	4,654	11,458	1.8958
2005	143.67	38,434.24	4,926	12,145	2.0204
2010	174.80	49,052.91	6,517	16,174	2.7541
2015	212.67	62,605.35	8,502	21,270	3.7542
2020	258.74	79,902.07	10,963	27,683	5.1176
2025	314.80	101,977.53	14,089	35,919	6.9761
2030	383.00	130,152.03	18,168	46,765	9.5095
2035	465.98	166,110.63	23,511	61,100	12.9629
2040	566.94	212,003.91	30,368	79,680	17.6704
2045	689.77	270,576.66	39,050	103,444	24.0875
2050	839.21	345,332.00	50,075	133,925	32.8350
2055	1,021.02	440,740.84	64,134	173,175	44.7591
2060	1,242.23	562,509.44	82,184	224,044	61.0136
2065	1,511.36	717,920.38	105,380	290,042	83.1709
2070	1,838.81	916,268.56	135,030	375,219	113.3747
Low Cost:					
1994	97.39	23,900.90	2,816	6,743	.9330
1995	100.00	24,877.54	2,987	7,169	1.0000
1996	102.82	25,893.51	3,162	7,593	1.0782
1997	105.90	27,069.68	3,348	8,041	1.1603
1998	109.11	28,246.31	3,542	8,504	1.2481
1999	112.36	29,465.17	3,743	8,980	1.3411
2000	115.73	30,816.93	3,954	9,475	1.4392
2001	119.20	32,175.98	4,169	9,988	1.5413
2002	122.78	33,564.27	4,392	10,528	1.6471
2003	126.46	35,042.25	4,630	11,099	1.7568
2004	130.25	36,608.61	4,885	11,705	1.8698
2005	134.16	38,256.00	5,150	12,342	1.9863
2010	155.53	47,573.95	6,717	16,130	2.6694
2015	180.30	59,410.42	8,616	20,756	3.5874
2020	209.02	74,036.21	10,951	26,500	4.8212
2025	242.31	92,262.61	13,913	33,831	6.4793
2030	280.90	114,976.00	17,781	43,447	8.7076
2035	325.64	143,281.02	22,851	56,103	11.7023
2040	377.51	178,554.20	29,395	72,518	15.7270
2045	437.64	222,511.06	37,731	93,531	21.1357
2050	507.34	277,289.25	48,369	120,476	28.4047
2055	588.15	345,552.91	62,029	155,242	38.1735
2060	681.82	430,621.84	79,644	200,284	51.3020
2065	790.42	536,633.19	102,332	258,572	68.9456
2070	916.31	668,742.56	131,390	333,588	92.6571

TABLE III.B1.—SELECTED ECONOMIC VARIABLES BY ALTERNATIVE, CALENDAR YEARS 1994-2070 (Cont.)

[GDP and taxable payroll in billions]

Calendar year	Adjusted CPI[1]	SSA average wage index[2]	Taxable payroll[3]	Gross domestic product	Compound interest-rate factor[4]
High Cost:					
1994	96.50	$23,786.58	$2,812	$6,731	0.9330
1995	100.00	24,662.31	2,943	7,059	1.0000
1996	103.96	25,506.82	3,031	7,242	1.0803
1997	109.58	27,002.88	3,201	7,784	1.1675
1998	116.66	28,597.25	3,412	8,319	1.2692
1999	122.38	29,685.73	3,527	8,521	1.3876
2000	128.46	31,293.06	3,716	9,154	1.5168
2001	134.88	32,885.74	3,950	9,798	1.6501
2002	141.63	34,523.78	4,193	10,419	1.7804
2003	148.71	36,358.49	4,439	11,071	1.9148
2004	156.14	38,342.62	4,701	11,772	2.0524
2005	163.95	40,451.47	4,996	12,541	2.1919
2010	209.24	52,868.47	6,715	17,050	3.0137
2015	267.05	69,096.99	8,937	22,984	4.1436
2020	340.84	90,306.99	11,725	30,582	5.6971
2025	435.00	118,027.64	15,272	40,411	7.8330
2030	555.19	154,257.39	19,903	53,426	10.7698
2035	708.57	201,606.23	25,965	70,705	14.8076
2040	904.34	263,493.88	33,694	93,080	20.3592
2045	1,154.19	344,375.91	43,422	121,687	27.9922
2050	1,473.07	450,085.56	55,679	158,291	38.4870
2055	1,880.06	588,243.81	71,144	205,178	52.9164
2060	2,399.48	768,811.25	90,892	265,915	72.7557
2065	3,062.42	1,004,805.44	116,113	344,609	100.0331
2070	3,908.51	1,313,240.50	148,267	446,393	137.5373

[1]The CPI used to adjust OASDI benefits is the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI), as defined by the Bureau of Labor Statistics, Department of Labor. The values shown are adjusted by dividing the calendar-year annual average CPI by the analogous value for 1995, and multiplying the result by 100, thereby initializing the CPI at 100 for 1995.

[2]The "SSA average wage index" is defined in section 215(i)(1)(G) of the Social Security Act; it is used in the calculations of initial benefits and the automatic adjustment of the contribution and benefit base and other wage-indexed program amounts.

[3]Taxable payroll consists of total earnings subject to OASDI contribution rates, adjusted to include deemed wages based on military service and to reflect the lower effective contribution rates (compared to the combined employee-employer rate) which apply to multiple-employer "excess wages."

[4]The compound interest-rate factor is based on the average of the assumed annual interest rates for special public-debt obligations issuable to the trust funds in the 12 months of the year, under each alternative.

Table III.B2 shows estimated operations of the combined OASI and DI Trust Funds in constant 1995 dollars (i.e., adjusted by the CPI indexing series as discussed above). Items included in the table are: income excluding interest, interest income, total income, total outgo, and assets at the end of the year. Income excluding interest consists of payroll-tax contributions, income from taxation of benefits, and miscellaneous reimbursements from the general fund of the Treasury. Outgo consists of benefit payments, administrative expenses, net transfers from the OASI and DI Trust Funds to the Railroad Retirement program under the financial-interchange provisions, and payments for vocational rehabilitation services for disabled beneficiaries. These estimates are based on the low cost, intermediate, and high cost sets of assumptions (alternatives I, II, and III).

TABLE III.B2.—ESTIMATED OPERATIONS OF THE COMBINED OASI AND DI TRUST FUNDS IN CONSTANT 1995 DOLLARS[1] BY ALTERNATIVE, CALENDAR YEARS 1995-2070

[In billions]

Calendar year	Income excluding interest	Interest income	Total income	Outgo	Assets at end of year
Intermediate:					
1995	$369.4	$35.9	$405.3	$340.1	$501.7
1996	379.5	39.7	419.2	346.4	558.8
1997	385.3	43.7	429.0	352.8	617.4
1998	390.5	47.7	438.2	359.0	676.3
1999	395.3	51.4	446.7	365.8	734.7
2000	400.7	54.9	455.7	372.6	791.7
2001	406.4	58.3	464.7	379.0	847.7
2002	412.2	61.5	473.7	385.8	902.9
2003	418.6	64.5	483.1	393.1	958.1
2004	425.4	67.3	492.7	400.9	1,013.2
2005	433.3	69.4	502.7	408.8	1,068.2
2010	472.6	78.4	551.0	458.2	1,320.4
2015	509.2	86.5	595.7	535.8	1,437.0
2020	544.6	77.9	622.5	634.3	1,265.8
2025[2]	580.1	47.1	627.2	733.4	723.5
Low Cost:					
1995	372.1	36.0	408.1	338.9	505.5
1996	387.8	40.3	428.1	343.9	575.9
1997	398.2	45.3	443.5	349.0	653.7
1998	408.8	50.9	459.7	354.2	739.9
1999	419.1	57.0	476.1	360.0	834.5
2000	430.2	63.3	493.5	366.3	937.5
2001	440.9	69.8	510.7	372.3	1,048.5
2002	450.7	76.4	527.1	378.6	1,166.4
2003	461.4	83.0	544.5	385.3	1,291.7
2004	472.6	89.8	562.3	392.5	1,424.0
2005	483.8	96.3	580.2	400.7	1,562.0
2010	545.5	130.4	675.9	455.9	2,321.5
2015	605.8	175.4	781.2	548.1	3,092.0
2020	669.1	213.1	882.2	666.0	3,725.8
2025	738.1	239.1	977.2	788.6	4,155.1
2030	817.5	255.0	1,072.6	899.1	4,419.9
2035	908.6	268.2	1,176.8	992.2	4,650.2
2040	1,008.9	287.6	1,296.5	1,067.4	5,001.4
2045	1,117.5	318.5	1,436.0	1,152.0	5,552.8
2050	1,236.5	360.4	1,596.9	1,257.5	6,290.5
2055	1,369.3	410.8	1,780.1	1,391.2	7,170.2
2060	1,518.0	468.5	1,986.5	1,540.5	8,178.6
2065	1,683.2	536.3	2,219.5	1,700.0	9,364.7
2070	1,864.9	616.8	2,481.8	1,876.6	10,773.2
High Cost:					
1995	368.2	35.9	404.1	341.4	499.1
1996	368.8	39.1	407.9	349.1	538.9
1997	368.1	41.7	409.8	351.6	569.4
1998	369.1	44.5	413.5	356.4	591.9
1999	364.3	47.0	411.3	369.9	605.7
2000	365.1	48.1	413.2	377.2	613.0
2001	370.4	48.3	418.8	385.2	617.4
2002	374.5	47.9	422.4	393.0	617.3
2003	377.9	46.9	424.8	400.7	612.0
2004	381.2	45.4	426.6	408.5	601.0
2005	386.2	42.6	428.7	415.4	585.7
2010	408.6	27.7	436.4	455.7	435.3
2015[2]	428.9	8.1	437.0	516.8	99.0

[1]The adjustment from current to constant dollars is by the CPI indexing series shown in table III.B1.

[2]Estimates for later years are not shown because the combined OASI and DI Trust Funds are estimated to become exhausted in 2030 under alternative II and in 2016 under alternative III.

Note: Totals do not necessarily equal the sums of rounded components.

Figure III.B1 provides a comparison of outgo with total annual income (including interest) and annual income excluding interest, for the OASDI program under intermediate assumptions. All values are expressed in constant dollars, as shown in table III.B2. The difference between the income values for each year is equal to the trust fund interest earnings. Thus the figure illustrates the fact that, under intermediate assumptions, combined OASDI expenditures will be payable from (1) current tax income alone through 2012, (2) current tax income plus a portion of annual interest income for years 2013 through 2019, and (3) current tax income, annual interest income, plus a portion of the principal balance in the trust funds for years 2019 through 2029, i.e., through the year preceding the year of trust fund exhaustion.

FIGURE III.B1.--ESTIMATED OASDI INCOME AND OUTGO IN CONSTANT DOLLARS, BASED ON ALTERNATIVE II, CALENDAR YEARS 1995-2030

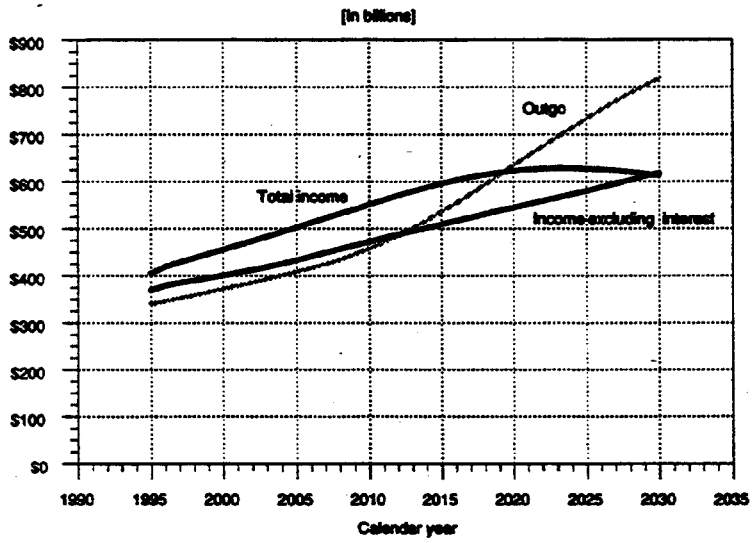

TABLE III.B3.—ESTIMATED OPERATIONS OF THE COMBINED OASI AND DI TRUST FUNDS IN CURRENT DOLLARS BY ALTERNATIVE, CALENDAR YEARS 1995-2070

[In billions]

Calendar year	Income excluding interest	Interest income	Total income	Outgo	Assets at end of year
Intermediate:					
1995	$369.4	$35.9	$405.3	$340.1	$501.7
1996	391.7	40.9	432.6	357.5	576.7
1997	410.7	46.6	457.3	376.0	658.1
1998	430.4	52.6	483.0	395.6	745.4
1999	450.7	58.6	509.4	417.1	837.7
2000	473.7	64.9	538.7	440.5	935.9
2001	499.1	71.6	570.7	465.5	1,041.1
2002	526.5	78.5	605.0	492.8	1,153.3
2003	556.1	85.7	641.8	522.3	1,272.8
2004	587.7	92.9	680.7	553.8	1,399.7
2005	622.5	99.7	722.2	587.3	1,534.6
2010	826.0	137.1	963.2	800.9	2,308.0
2015	1,082.9	184.0	1,266.9	1,139.4	3,056.1
2020	1,409.1	201.7	1,610.8	1,641.2	3,275.2
2025[1]	1,826.3	148.2	1,974.5	2,308.8	2,277.7
Low Cost:					
1995	372.1	36.0	408.1	338.9	505.5
1996	398.7	41.4	440.1	353.5	592.1
1997	421.7	48.0	469.7	369.5	692.2
1998	446.0	55.5	501.6	386.5	807.3
1999	470.9	64.0	534.9	404.5	937.7
2000	497.9	73.2	571.1	423.9	1,084.9
2001	525.5	83.2	608.7	443.9	1,249.8
2002	553.4	93.8	647.2	464.9	1,432.2
2003	583.5	105.0	688.6	487.2	1,633.5
2004	615.5	116.9	732.4	511.2	1,854.8
2005	649.1	129.2	778.3	537.5	2,095.6
2010	848.4	202.8	1,051.1	709.1	3,610.7
2015	1,092.3	316.2	1,408.5	988.2	5,574.9
2020	1,398.5	445.5	1,844.0	1,392.1	7,787.6
2025	1,788.5	579.4	2,367.8	1,910.9	10,068.3
2030	2,296.5	716.4	3,012.9	2,525.5	12,415.6
2035	2,958.8	873.4	3,832.3	3,231.1	15,142.9
2040	3,808.8	1,085.8	4,894.5	4,029.7	18,880.7
2045	4,890.5	1,394.0	6,284.5	5,041.5	24,301.3
2050	6,273.4	1,828.4	8,101.9	6,379.8	31,914.2
2055	8,053.6	2,416.0	10,469.6	8,182.5	42,171.4
2060	10,349.9	3,194.6	13,544.5	10,503.6	55,763.8
2065	13,304.5	4,239.0	17,543.5	13,437.4	74,020.4
2070	17,088.7	5,652.1	22,740.8	17,195.2	98,716.4
High Cost:					
1995	368.2	35.9	404.1	341.4	499.1
1996	383.4	40.6	424.0	362.9	560.2
1997	403.4	45.7	449.1	385.4	624.0
1998	430.6	51.9	482.4	415.9	690.6
1999	445.9	57.5	503.4	452.7	741.3
2000	469.0	61.8	530.8	484.6	787.5
2001	499.7	65.2	564.8	519.6	832.8
2002	530.3	67.8	598.2	556.7	874.3
2003	562.0	69.8	631.8	595.9	910.1
2004	595.2	70.9	666.1	637.8	938.4
2005	633.1	69.8	702.9	681.0	960.3
2010	855.1	58.1	913.1	953.4	910.9
2015[1]	1,145.3	21.7	1,167.1	1,330.2	264.3

[1]Estimates for later years are not shown because the combined OASI and DI Trust Funds are estimated to become exhausted in 2030 under alternative II and in 2016 under alternative III.

Note: Totals do not necessarily equal the sums of rounded components.

Table III.B3 shows estimated operations of the combined OASI and DI Trust Funds in current dollars—that is in dollars unadjusted for inflation. Items included in the table are: income excluding interest, interest income, total income, total outgo, and assets at the end of the year. These estimates, based on the low cost, intermediate, and high cost sets of economic and demographic assumptions (I, II, and III), are presented to facilitate independent analysis.

Table III.B4 shows estimated income (excluding interest) and estimated total outgo (excluding the cost of accumulating target trust fund balances) of the combined OASI and DI Trust Funds, of the HI Trust Fund, and of the combined OASI, DI, and HI Trust Funds, based on the low cost, intermediate, and high cost sets of assumptions (alternatives I, II, and III) described earlier in this report. For OASDI, income excluding interest consists of payroll-tax contributions, proceeds from taxation of OASDI benefits, and miscellaneous transfers from the general fund of the Treasury. Outgo consists of benefit payments, administrative expenses, net transfers from the trust funds to the Railroad Retirement program, and payments for vocational rehabilitation services for disabled beneficiaries. For HI, income excluding interest consists of contributions (including contributions from railroad employment), proceeds from the taxation of OASDI benefits, and payments from the general fund of the Treasury for contributions on deemed wage credits for military service. Total outgo consists of outlays (benefits and administrative expenses) for insured beneficiaries. Income and outgo estimates are shown on a cash basis for the OASDI program and on an incurred basis for the HI program.

Table III.B4 also shows the difference between income excluding interest and outgo, which is called the balance. The balance indicates the size of the net cash flow from tax income and expenditures to the funds.

TABLE III.B4.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE IN CURRENT DOLLARS BY ALTERNATIVE, CALENDAR YEARS 1995-2070

[In billions]

Calendar year	OASDI			HI			Combined		
	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance
Intermediate:									
1995	$369	$340	$29	$106	$115	-$9	$476	$455	$20
1996	392	358	34	112	125	-14	503	483	21
1997	411	376	35	118	136	-18	528	512	17
1998	430	396	35	124	147	-23	554	542	12
1999	451	417	34	130	158	-29	581	575	5
2000	474	440	33	137	171	-34	610	611	-1
2001	499	465	34	144	185	-41	643	650	-7
2002	526	493	34	152	199	-47	679	692	-13
2003	556	522	34	161	215	-54	717	737	-20
2004	588	554	34	171	232	-61	758	785	-27
2005	622	587	35	181	249	-68	804	837	-33
2010	826	801	25	245	361	-116	1,071	1,162	-90
2015	1,083	1,139	-57	329	532	-203	1,412	1,672	-260
2020	1,409	1,641	-232	431	783	-352	1,840	2,425	-584
2025	1,825	2,309	-482	563	1,152	-589	2,389	3,461	-1,072
2030	2,371	3,136	-766	734	1,668	-934	3,104	4,804	-1,700
2035	3,081	4,131	-1,051	956	2,333	-1,377	4,037	6,464	-2,427
2040	3,988	5,309	-1,321	1,237	3,160	-1,923	5,225	8,469	-3,244
2045	5,137	6,823	-1,686	1,594	4,189	-2,595	6,731	11,012	-4,281
2050	6,601	8,843	-2,242	2,051	5,490	-3,439	8,652	14,334	-5,681
2055	8,478	11,590	-3,112	2,641	7,196	-4,555	11,118	18,786	-7,667
2060	10,893	15,192	-4,299	3,402	9,512	-6,110	14,295	24,704	-10,409
2065	13,996	19,801	-5,805	4,381	12,634	-8,253	18,376	32,435	-14,058
2070	17,962	25,707	-7,745	5,632	16,824	-11,192	23,594	42,531	-18,938
Low Cost:									
1995	372	339	33	107	115	-8	479	454	25
1996	399	354	45	113	124	-11	512	477	35
1997	422	370	52	120	133	-13	542	502	40
1998	446	386	60	127	142	-15	573	529	45
1999	471	405	66	134	152	-18	605	556	49
2000	498	424	74	142	162	-20	640	586	54
2001	526	444	82	150	173	-23	675	616	59
2002	553	465	89	158	183	-25	711	648	63
2003	584	487	96	166	194	-28	750	681	69
2004	616	511	104	175	205	-30	791	716	75
2005	649	538	112	185	217	-31	835	754	81
2010	848	709	139	247	286	-39	1,095	995	100
2015	1,092	988	104	324	383	-59	1,416	1,371	45
2020	1,398	1,392	6	417	511	-94	1,816	1,903	-88
2025	1,788	1,911	-122	537	681	-144	2,325	2,592	-267
2030	2,297	2,526	-229	691	913	-222	2,987	3,439	-452
2035	2,959	3,231	-272	890	1,212	-322	3,849	4,443	-594
2040	3,809	4,030	-221	1,144	1,592	-449	4,953	5,622	-670
2045	4,891	5,042	-151	1,467	2,098	-631	6,357	7,140	-783
2050	6,273	6,380	-106	1,880	2,750	-869	8,154	9,130	-976
2055	8,054	8,182	-129	2,415	3,609	-1,193	10,469	11,791	-1,322
2060	10,350	10,504	-154	3,106	4,775	-1,669	13,456	15,279	-1,823
2065	13,304	13,437	-133	3,993	6,360	-2,367	17,298	19,798	-2,500
2070	17,089	17,195	-107	5,129	8,482	-3,353	22,218	25,677	-3,459

TABLE III.B4.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE IN CURRENT DOLLARS BY ALTERNATIVE, CALENDAR YEARS 1995-2070 (Cont.)

[In billions]

Calendar year	OASDI			HI			Combined		
	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance
High Cost:									
1995	$368	$341	$27	$106	$115	–$10	$474	$457	$17
1996	383	363	21	109	126	–17	493	489	3
1997	403	385	18	116	140	–23	519	525	–5
1998	431	416	15	124	155	–30	555	571	–16
1999	446	453	–7	129	169	–40	575	622	–47
2000	469	485	–16	136	186	–50	605	670	–65
2001	500	520	–20	145	206	–60	645	725	–80
2002	530	557	–26	155	226	–72	685	783	–98
2003	562	596	–34	164	249	–85	726	845	–119
2004	595	638	–43	175	274	–99	770	912	–142
2005	633	681	–48	186	300	–114	820	981	–162
2010	855	953	–98	257	480	–223	1,112	1,434	–321
2015	1,145	1,380	–235	353	785	–432	1,498	2,165	–667
2020	1,519	2,035	–516	472	1,285	–813	1,991	3,320	–1,329
2025	1,999	2,940	–941	627	2,094	–1,466	2,627	5,034	–2,407
2030	2,629	4,121	–1,492	831	3,278	–2,448	3,459	7,399	–3,940
2035	3,452	5,618	–2,166	1,096	4,836	–3,740	4,549	10,454	–5,906
2040	4,501	7,485	–2,984	1,433	6,737	–5,304	5,935	14,222	–8,288
2045	5,826	9,946	–4,120	1,861	9,022	–7,161	7,687	18,968	–11,281
2050	7,507	13,275	–5,768	2,409	11,832	–9,423	9,916	25,107	–15,191
2055	9,649	17,859	–8,209	3,115	15,478	–12,363	12,765	33,337	–20,573
2060	12,403	23,987	–11,584	4,030	20,387	–16,357	16,433	44,374	–27,940
2065	15,930	31,972	–16,042	5,206	27,012	–21,806	21,136	58,983	–37,847
2070	20,435	42,314	–21,880	6,711	35,843	–29,132	27,145	78,157	–51,011

Notes:
1. Annual figures are available from the Office of the Actuary, Social Security Administration.
2. Totals do not necessarily equal the sums of rounded components.

Table III.B5 shows estimated future benefit amounts payable to persons attaining age 65 in various years based on retirement at the normal retirement age and at age 65, for various steady levels of pre-retirement earnings, based on intermediate assumptions. The benefit amount is shown in current dollars, constant dollars (adjusted by the CPI indexing series shown in table III.B1), and as a percentage of earnings in the 12-month period preceding retirement. The normal retirement age is currently 65, and is scheduled to increase to age 66 during the period 2000-2005 (at a rate of 2 months per year as workers attain age 62), and to age 67 during the period 2017-2022 (also by 2 months per year as workers attain age 62). The pre-retirement earnings levels shown are: low (earnings at 45 percent of the projected SSA average wage index), average (earnings at the amount of the projected SSA average wage index), and maximum (earnings at the amount of the projected OASDI contribution and benefit base).

TABLE III.B5.—ESTIMATED AVERAGE BENEFIT AMOUNT PAYABLE[1] TO RETIRED WORKERS WITH VARIOUS STEADY PRE-RETIREMENT EARNINGS LEVELS BASED ON INTERMEDIATE ASSUMPTIONS, CALENDAR YEARS 1995-2070

Year attain age 65[3]	Age at retirement	Current dollars			Constant 1995 dollars[2]			Percent of earnings		
		Low[4]	Average	Maximum[5]	Low[4]	Average	Maximum[5]	Low[4]	Average	Maximum[5]
Retirement at normal retirement age:										
1995	65:0	$6,255	$10,322	$14,424	$6,255	$10,322	$14,424	58.2	43.2	23.8
2000	65:0	7,535	12,446	18,092	6,374	10,529	15,305	57.5	42.7	25.4
2005	65:6	9,577	15,820	23,867	6,536	10,797	16,290	56.7	42.2	26.5
2010	66:0	12,413	20,529	32,014	6,828	11,293	17,610	56.2	41.9	27.2
2015	66:0	15,845	26,211	41,586	7,164	11,851	18,802	56.2	41.9	27.7
2020	66:2	20,361	33,672	53,607	7,517	12,432	19,792	56.2	41.8	27.8
2025	67:0	26,993	44,716	71,072	7,928	13,133	20,874	56.0	41.8	27.7
2030	67:0	34,446	57,070	90,685	8,315	13,777	21,891	56.0	41.8	27.7
2035	67:0	43,970	72,842	115,692	8,724	14,453	22,954	56.0	41.8	27.7
2040	67:0	56,118	92,961	147,322	9,152	15,160	24,025	56.0	41.8	27.6
2045	67:0	71,626	118,654	187,836	9,601	15,904	25,177	56.0	41.8	27.6
2050	67:0	91,419	151,439	239,681	10,072	16,684	26,406	56.0	41.8	27.6
2055	67:0	116,679	193,290	305,900	10,566	17,503	27,700	56.0	41.8	27.6
2060	67:0	148,911	246,688	390,421	11,083	18,360	29,058	56.0	41.8	27.6
2065	67:0	190,063	314,858	498,299	11,627	19,261	30,483	56.0	41.8	27.6
2070	67:0	242,570	401,847	635,953	12,196	20,205	31,976	56.0	41.8	27.6
Retirement at age 65:										
1995	65:0	$6,255	$10,322	$14,424	$6,255	$10,322	$14,424	58.2	43.2	23.8
2000	65:0	7,535	12,446	18,092	6,374	10,529	15,305	57.5	42.7	25.4
2005	65:0	9,078	14,990	22,623	6,319	10,434	15,746	55.1	41.0	25.7
2010	65:0	11,089	18,325	28,486	6,344	10,484	16,297	52.7	39.2	25.5
2015	65:0	14,159	23,394	37,095	6,658	11,000	17,443	52.8	39.2	26.0
2020	65:0	17,856	29,498	47,028	6,901	11,400	18,176	52.1	38.8	25.8
2025	65:0	21,431	35,386	56,444	6,808	11,241	17,930	49.0	36.4	24.2
2030	65:0	27,343	45,162	72,035	7,139	11,792	18,808	49.0	36.4	24.3
2035	65:0	34,904	57,648	91,889	7,490	12,371	19,719	49.0	36.4	24.2
2040	65:0	44,548	73,576	117,017	7,858	12,978	20,640	49.0	36.4	24.2
2045	65:0	56,865	93,912	149,188	8,244	13,615	21,629	49.0	36.4	24.2
2050	65:0	72,577	119,858	190,376	8,648	14,282	22,685	49.0	36.4	24.2
2055	65:0	92,635	152,988	242,968	9,073	14,982	23,797	49.0	36.4	24.2
2060	65:0	118,221	195,240	310,102	9,517	15,717	24,963	49.0	36.4	24.2
2065	65:0	150,897	249,191	395,791	9,984	16,488	26,188	49.0	36.4	24.2
2070	65:0	192,591	318,036	505,126	10,474	17,296	27,470	49.0	36.4	24.2

[1]Annual benefit amount is the benefit payable for the 12-month period starting with the month of retirement.

[2]The adjustment from current to constant dollars is made using the CPI indexing series shown in table III.B1.

[3]Assumed to attain age 65 in January of the year.

[4]Earnings equal to 45 percent of average.

[5]Earnings equal to the OASDI contribution and benefit base.

C. LONG-RANGE ESTIMATES OF SOCIAL SECURITY TRUST FUND OPERATIONS AS A PERCENTAGE OF THE GROSS DOMESTIC PRODUCT

This appendix presents long-range projections of the operations of the combined Old-Age and Survivors Insurance and Disability Insurance (OASI and DI) Trust Funds and of the Hospital Insurance (HI) Trust Fund expressed as a percentage of the gross domestic product (GDP). While expressing these fund operations as a percentage of taxable payroll is the most useful approach for assessing the financial status of the programs, (see table II.F13 and section III.A), analyzing them as a percentage of GDP provides an additional perspective on these fund operations in relation to the total value of goods and services produced in the United States.

Table III.C1 shows estimated income excluding interest, total outgo, and the resulting balance of the combined OASI and DI Trust Funds, of the HI Trust Fund, and of the combined OASI, DI, and HI Trust Funds, expressed as percentages of GDP on the basis of each of the three alternative sets of assumptions. The estimated GDP on which these percentages are based is also shown in table III.C1. For OASDI, income excluding interest consists of payroll-tax contributions, proceeds from taxation of benefits, and various reimbursements from the general fund of the Treasury. Total outgo consists of benefit payments, administrative expenses, net transfers from the trust funds to the Railroad Retirement program, and payments for vocational rehabilitation services for disabled beneficiaries. For HI, income excluding interest consists of contributions (including contributions from railroad employment) and payments from the general fund of the Treasury for contributions on deemed wage credits for military service. Total outgo consists of outlays (benefits and administrative expenses) for insured beneficiaries. Both the HI income and outgo are on an incurred basis.

The OASDI balance (income excluding interest, less outgo) as a percentage of GDP is projected to be positive on the basis of the low cost alternative I through 2020, but with decreasing deficits after 2030. The OASDI balance is projected to be positive through 2010 on the basis of the intermediate alternative II and through 1998 on the basis of the high cost alternative III, before becoming permanently negative, with increasing deficits. The projected HI balance as a percentage of GDP, however, is negative, with increasing def-

icits, throughout the long-range period under all three alternatives. The combined OASDI and HI balance as a percentage of GDP is projected to be positive through 2015 under the low cost alternative I, through 1999 under the intermediate alternative II, and through only 1996 under the high cost alternative III. Between 2010 and about 2030, under all three alternatives, both the OASDI and HI balances as percentages of GDP are projected to decline substantially because the "baby-boom" generation reaches retirement age during these years. After balances cease to be positive under the intermediate and high cost alternatives, the size of annual deficits increases fairly steadily for the OASDI and HI programs, both separately and combined.

By the year 2070, the combined OASDI and HI balances as percentages of GDP, based on the three alternatives, are projected to differ by a relatively large amount: from a deficit of 1.04 percent for the low cost alternative I to a deficit of 11.43 percent for the high cost alternative III. Projected balances differ by a much smaller amount by the year 2005: from a positive balance of 0.65 percent for the low cost alternative I to a deficit of 1.29 percent for the high cost alternative III.

The summarized long-range (75-year) balance as a percentage of GDP for the combined OASDI and HI programs varies by a relatively large amount (from a deficit of 0.24 percent, based on the low cost alternative I, to a deficit of 5.73 percent, based on the high cost alternative III). The 25-year summarized balance varies by a smaller amount (from a positive of 0.59 percent to a deficit of 1.56 percent). Summarized rates are calculated on the present-value basis including the trust fund balances on January 1, 1995 and the cost of reaching and maintaining a target trust fund level equal to 100 percent of annual expenditures by the end of the period. (See section II.F for further explanation.)

TABLE III.C1.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE AS A PERCENTAGE OF GDP BY ALTERNATIVE, CALENDAR YEARS 1995-2070

	Percentage of GDP									
	OASDI			HI			Combined			
Calendar year	Income[1]	Outgo	Balance	Income[1]	Outgo	Balance	Income[1]	Outgo	Balance	GDP in dollars (billions)
Intermediate:										
1995	5.19	4.78	0.41	1.49	1.62	−0.13	6.68	6.40	0.29	$7,116
1996	5.23	4.77	.46	1.49	1.67	−.18	6.72	6.45	.27	7,492
1997	5.21	4.77	.44	1.49	1.72	−.23	6.71	6.50	.21	7,876
1998	5.20	4.78	.42	1.49	1.77	−.28	6.70	6.56	.14	8,269
1999	5.19	4.80	.39	1.49	1.82	−.33	6.68	6.62	.06	8,686
2000	5.18	4.82	.36	1.49	1.87	−.38	6.68	6.69	−.01	9,143
2001	5.17	4.82	.35	1.49	1.91	−.42	6.66	6.73	−.07	9,656
2002	5.15	4.82	.33	1.49	1.95	−.46	6.64	6.77	−.13	10,217
2003	5.14	4.83	.31	1.49	1.99	−.50	6.63	6.81	−.18	10,817
2004	5.13	4.83	.30	1.49	2.02	−.53	6.62	6.85	−.23	11,458
2005	5.13	4.84	.29	1.49	2.05	−.56	6.62	6.89	−.27	12,145
2010	5.11	4.95	.16	1.52	2.23	−.71	6.62	7.18	−.56	16,174
2015	5.09	5.36	−.27	1.55	2.50	−.96	6.64	7.86	−1.22	21,270
2020	5.09	5.93	−.84	1.56	2.83	−1.27	6.65	8.76	−2.11	27,683
2025	5.08	6.43	−1.34	1.57	3.21	−1.64	6.65	9.63	−2.98	35,919
2030	5.07	6.71	−1.64	1.57	3.57	−2.00	6.64	10.27	−3.63	46,765
2035	5.04	6.76	−1.72	1.56	3.82	−2.25	6.61	10.58	−3.97	61,100
2040	5.01	6.66	−1.66	1.55	3.97	−2.41	6.56	10.63	−4.07	79,680
2045	4.97	6.60	−1.63	1.54	4.05	−2.51	6.51	10.65	−4.14	103,444
2050	4.93	6.60	−1.67	1.53	4.10	−2.57	6.46	10.70	−4.24	133,925
2055	4.90	6.69	−1.80	1.52	4.16	−2.63	6.42	10.85	−4.43	173,175
2060	4.86	6.78	−1.92	1.52	4.25	−2.73	6.38	11.03	−4.65	224,044
2065	4.83	6.83	−2.00	1.51	4.36	−2.85	6.34	11.18	−4.85	290,042
2070	4.79	6.85	−2.06	1.50	4.48	−2.98	6.29	11.34	−5.05	375,219
Summarized rates:[2]										
25-year:										
1995-2019 .	5.46	5.24	.22	1.61	2.23	−.62	7.06	7.47	−.40	---
50-year:										
1995-2044 .	5.28	5.81	−.53	1.59	2.82	−1.23	6.87	8.63	−1.76	---
75-year:										
1995-2069 .	5.18	6.03	−.85	1.57	3.17	−1.60	6.75	9.20	−2.45	---
Low Cost:										
1995	5.19	4.73	.46	1.49	1.60	−.11	6.68	6.33	.35	7,169
1996	5.25	4.66	.59	1.49	1.63	−.14	6.74	6.29	.46	7,593
1997	5.24	4.60	.65	1.49	1.65	−.16	6.74	6.25	.49	8,041
1998	5.25	4.54	.70	1.49	1.67	−.18	6.74	6.22	.52	8,504
1999	5.24	4.50	.74	1.50	1.69	−.20	6.74	6.20	.54	8,980
2000	5.26	4.47	.78	1.50	1.71	−.21	6.75	6.19	.57	9,475
2001	5.26	4.44	.82	1.50	1.73	−.23	6.76	6.17	.59	9,988
2002	5.26	4.42	.84	1.50	1.74	−.24	6.75	6.15	.60	10,528
2003	5.26	4.39	.87	1.50	1.75	−.25	6.75	6.14	.62	11,099
2004	5.26	4.37	.89	1.50	1.75	−.25	6.76	6.12	.64	11,705
2005	5.26	4.36	.90	1.50	1.75	−.25	6.76	6.11	.65	12,342
2010	5.26	4.40	.86	1.53	1.77	−.24	6.79	6.17	.62	16,130
2015	5.26	4.76	.50	1.56	1.85	−.29	6.82	6.61	.22	20,756
2020	5.28	5.25	.02	1.58	1.93	−.35	6.85	7.18	−.33	26,500
2025	5.29	5.65	−.36	1.59	2.01	−.43	6.87	7.66	−.79	33,831
2030	5.29	5.81	−.53	1.59	2.10	−.51	6.88	7.92	−1.04	43,447
2035	5.27	5.76	−.49	1.59	2.16	−.57	6.86	7.92	−1.06	56,103
2040	5.25	5.56	−.30	1.58	2.20	−.62	6.83	7.75	−.92	72,518
2045	5.23	5.39	−.16	1.57	2.24	−.68	6.80	7.63	−.84	93,531
2050	5.21	5.30	−.09	1.56	2.28	−.72	6.77	7.58	−.81	120,476

Percentage of GDP

TABLE III.C1.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE AS A PERCENTAGE OF GDP BY ALTERNATIVE, CALENDAR YEARS 1995-2070 (Cont.)

	Percentage of GDP									
	OASDI			HI			Combined			
Calendar year	Income[1]	Outgo	Balance	Income[1]	Outgo	Balance	Income[1]	Outgo	Balance	GDP in dollars (billions)
Low Cost (Cont.):										
2055	5.19	5.27	−0.08	1.56	2.32	−0.77	6.74	7.60	−0.85	$155,242
2060	5.17	5.24	−.08	1.55	2.38	−.83	6.72	7.63	−.91	200,284
2065	5.15	5.20	−.05	1.54	2.46	−.92	6.69	7.66	−.97	258,572
2070	5.12	5.15	−.03	1.54	2.54	−1.00	6.66	7.70	−1.04	333,588
Summarized rates:[2]										
25-year:										
1995-2019 .	5.57	4.77	.80	1.61	1.83	−.22	7.18	6.59	.59	---
50-year:										
1995-2044 .	5.44	5.13	.31	1.60	1.94	−.34	7.04	7.08	−.03	---
75-year:										
1995-2069 .	5.38	5.16	.22	1.59	2.05	−.46	6.96	7.21	−.24	---
High Cost:										
1995	5.22	4.84	.38	1.49	1.63	−.14	6.71	6.47	.24	7,059
1996	5.29	5.01	.28	1.51	1.74	−.24	6.80	6.76	.05	7,242
1997	5.18	4.95	.23	1.49	1.79	−.30	6.67	6.74	−.07	7,784
1998	5.18	5.00	.18	1.50	1.86	−.36	6.67	6.86	−.19	8,319
1999	5.23	5.31	−.08	1.51	1.98	−.47	6.74	7.30	−.55	8,521
2000	5.12	5.29	−.17	1.49	2.03	−.54	6.61	7.32	−.71	9,154
2001	5.10	5.30	−.20	1.48	2.10	−.62	6.58	7.40	−.82	9,798
2002	5.09	5.34	−.25	1.48	2.17	−.69	6.57	7.52	−.94	10,419
2003	5.08	5.38	−.31	1.48	2.25	−.77	6.56	7.63	−1.07	11,071
2004	5.06	5.42	−.36	1.48	2.33	−.84	6.54	7.74	−1.20	11,772
2005	5.05	5.43	−.38	1.49	2.40	−.91	6.54	7.83	−1.29	12,541
2010	5.02	5.59	−.58	1.51	2.82	−1.31	6.52	8.41	−1.88	17,050
2015	4.98	6.00	−1.02	1.54	3.42	−1.88	6.52	9.42	−2.90	22,984
2020	4.97	6.65	−1.69	1.54	4.20	−2.66	6.51	10.86	−4.35	30,582
2025	4.95	7.28	−2.33	1.55	5.18	−3.63	6.50	12.46	−5.96	40,411
2030	4.92	7.71	−2.79	1.55	6.14	−4.58	6.48	13.85	−7.37	53,426
2035	4.88	7.95	−3.06	1.55	6.84	−5.29	6.43	14.79	−8.35	70,705
2040	4.84	8.04	−3.21	1.54	7.24	−5.70	6.38	15.28	−8.90	93,080
2045	4.79	8.17	−3.39	1.53	7.41	−5.88	6.32	15.59	−9.27	121,687
2050	4.74	8.39	−3.64	1.52	7.47	−5.95	6.26	15.86	−9.60	158,291
2055	4.70	8.70	−4.00	1.52	7.54	−6.03	6.22	16.25	−10.03	205,178
2060	4.66	9.02	−4.36	1.52	7.67	−6.15	6.18	16.69	−10.51	265,915
2065	4.62	9.28	−4.65	1.51	7.84	−6.33	6.13	17.12	−10.98	344,609
2070	4.58	9.48	−4.90	1.50	8.03	−6.53	6.08	17.51	−11.43	446,393
Summarized rates:[2]										
25-year:										
1995-2019 .	5.40	5.80	−.40	1.60	2.76	−1.16	7.00	8.56	−1.56	---
50-year:										
1995-2044 .	5.18	6.64	−1.46	1.58	4.32	−2.74	6.76	10.95	−4.20	---
75-year:										
1995-2069 .	5.05	7.19	−2.13	1.56	5.16	−3.59	6.62	12.34	−5.73	---

[1]Income excludes interest on the trust funds.

[2]Summarized rates are calculated on the present-value basis including the value of the trust funds on January 1, 1995 and the cost of reaching and maintaining a target trust fund level equal to 100 percent of annual expenditures by the end of the period.

Note: Totals do not necessarily equal the sums of rounded components.

The difference between trust fund operations expressed as percentages of taxable payroll and those expressed as percentages of GDP can be seen by analyzing the estimated ratios of OASDI taxable payroll to GDP, which are presented in table III.C2. HI taxable payroll is about 20 percent larger than the OASDI taxable payroll throughout the long-range period (see section III.A for a detailed description of the difference). The cost as a percentage of GDP is approximately equal to the cost as a percentage of taxable payroll multiplied by the ratio of taxable payroll to GDP.

TABLE III.C2.—RATIO OF OASDI TAXABLE PAYROLL TO GDP BY ALTERNATIVE, CALENDAR YEARS 1995-2070

Calendar year	Intermediate	Low Cost	High Cost
1995	0.416	0.417	0.417
1996	.414	.416	.418
1997	.414	.416	.411
1998	.413	.417	.410
1999	.412	.417	.414
2000	.411	.417	.406
2001	.409	.417	.403
2002	.408	.417	.402
2003	.407	.417	.401
2004	.406	.417	.399
2005	.406	.417	.398
2010	.403	.416	.394
2015	.400	.415	.389
2020	.396	.413	.383
2025	.392	.411	.378
2030	.389	.409	.373
2035	.385	.407	.367
2040	.381	.405	.362
2045	.377	.403	.357
2050	.374	.401	.352
2055	.370	.400	.347
2060	.367	.398	.342
2065	.363	.396	.337
2070	.360	.394	.332

Projections of GDP for the first several years were based on assumed quarterly changes in real GDP and the GDP implicit price deflator. Thereafter, projections of GDP were based on the projected increases in U.S. employment, labor productivity, and the GDP implicit price deflator. Productivity projections are consistent with assumed changes in the level of average earnings, the ratio of earnings to worker compensation, the ratio of worker compensation to GDP, and average hours worked per year (see section II.H).

Projections of taxable payroll, which are described in detail in section II.H, were based on the projected increases in covered employment and average taxable earnings. Therefore, the projected increases in taxable payroll differ from projected increases in GDP primarily to

the extent that average taxable earnings are assumed to increase more slowly than is productivity and to the extent that OASDI program coverage of employment changes over time.

The long-range trend in the ratio of taxable payroll to GDP reflects the assumed trend in the ratio of wages to total employee compensation—i.e., wages plus fringe benefits. The ratio of wages to total employee compensation declined at average annual rates of 0.36 percent for the 40 years 1954-93 and 0.37, 0.44, 0.49, and 0.12 percent for the 10-year periods 1954-63, 1964-73, 1974-83, and 1984-93, respectively. Ultimate future annual rates of decline in the ratio of wages to employee compensation are assumed to be 0.1, 0.2, and 0.3 percent for alternatives I, II, and III, respectively. An additional factor that has made the overall ratio of taxable payroll to GDP decline in recent years is the decline in the ratio of taxable earnings to covered earnings, as a result the relatively greater increases in earnings for persons with earnings above the benefit and contribution base. This decline in the taxable ratio is assumed to continue at a slower pace through the end of this century.

Between 1983 and 2015, however, the tendency toward decreases in the ratio of taxable payroll to GDP, discussed above, is at least partially offset by the gradually expanding OASDI coverage of Federal civilian employment resulting from the 1983 amendments.

For the low cost alternative I, the ratio of taxable payroll to GDP is projected to be nearly constant through the year 2005, and then to decrease for the remainder of the long-range period. For the intermediate and high cost alternatives, the ratio of taxable payroll to GDP is projected to decrease essentially throughout the long-range period.

D. TEN YEAR HISTORY OF ACTUARIAL BALANCE ESTIMATES

This appendix chronicles the recent history of the primary measure of long-range actuarial status, namely the actuarial balance, as shown in the annual reports for 1985 and later. Actuarial balance is defined in detail in section II.F, Actuarial Estimates. Conceptually, the two basic components of actuarial balance are the summarized income rate and the summarized cost rate. Both rates are expressed as percentages of taxable payroll. For any given period, the actuarial balance is the difference between the present value of tax income for the period, and the present value of the outgo for the period, each divided by the present value of taxable payroll for all years in the period. Also included in the calculation of the actuarial balance are:

1. The amount of the trust fund balances on hand at the beginning of the valuation period, as shown in the reports for 1988 and later, and

2. The present value of a target trust fund balance equal to 100 percent of the amount of annual outgo to be reached and maintained by the end of the valuation period, as shown in the reports for 1991 and later.

It should be noted that the current method of calculating the actuarial balance based on present values, though used prior to the 1973 Annual Report, was not used for the annual reports of 1973-87. Instead, a simpler method that approximates the results of the present-value approach, called the "average-cost" method, was used during that period. Under the average-cost method, the sum of the annual cost rates (which are expressed as percentages of taxable payroll) over the 75-year projection period was divided by the total number of years, 75, to obtain the average cost rate per year. The average income rate was similarly calculated, and the difference between the average income rate and the average cost rate was called the actuarial balance.

In 1973, when the average-cost method was first used, the long-range financing of the program was more nearly on a pay-as-you-go basis. Also, based on the long-range economic and demographic assumptions then being used, the annual rate of growth in taxable payroll was about the same as the annual rate at which the trust funds earned interest. In either situation (i.e., pay-as-you-go financing,

where the annual income rate is the same as the annual cost rate, or an annual rate of growth in taxable payroll equal to the annual interest rate), the average-cost method produces the same result as the present-value method. However, by 1988, neither of these situations still existed.

As a result of legislation enacted in 1977 and in 1983, substantial increases in the trust funds were estimated to occur well into the next century, so that the program was partially "advance funded," rather than being funded on a pay-as-you-go basis. Also, because of declines in long-range fertility rates and average real-wage growth that were assumed in the annual reports over the period 1973-87, the annual rate of growth in taxable earnings assumed for the long range became significantly lower than the assumed interest rate. Therefore, during the period 1973-87, the results of the average-cost method and the present-value method began to diverge, and by 1988 they were quite different. While the average-cost method still accounted for most of the effects of the assumed interest rate, it no longer accounted for all of the interest effects. The present-value method, of course, does account for the full effect of the assumed interest rates. So, in 1988, the present-value method of calculating the actuarial balance was resumed.

A positive actuarial balance indicates that estimated income is more than sufficient to meet estimated trust fund obligations for the period as a whole. A negative actuarial balance indicates that estimated income is insufficient to meet estimated trust fund obligations for the entire period. An actuarial balance of zero indicates that the estimated income exactly matches estimated trust fund obligations for the period.

Table III.D1 shows the estimated OASDI actuarial balances, as well as the summarized income and cost rates, for the last 10 annual reports (1985-1994), along with the estimates for the current report. The values shown are based on the intermediate alternative II assumptions, or alternative II-B for years prior to 1991.

TABLE III.D1.—LONG-RANGE ACTUARIAL BALANCES FOR THE OASDI PROGRAM AS SHOWN FOR THE INTERMEDIATE ASSUMPTIONS[1] IN THE TRUSTEES REPORTS ISSUED IN YEARS 1985-1995

[As a percentage of taxable payroll]

Year of report	Summarized income rate	Summarized cost rate	Actuarial balance	Change from previous year
1985	12.94	13.35	−0.41	−0.35
1986	12.96	13.40	−.44	−.03
1987	12.89	13.51	−.62	−.18
1988	12.94	13.52	−.58	+.04
1989	13.02	13.72	−.70	−.13
1990	13.04	13.95	−.91	−.21
1991	13.11	14.19	−1.08	−.17
1992	13.16	14.63	−1.46	−.38
1993	13.21	14.67	−1.46	−.00
1994	13.24	15.37	−2.13	−.66
1995	13.27	15.44	−2.17	−.04

[1]Values shown are based on the intermediate alternative II assumptions for 1991-95, and on the intermediate alternative II-B assumptions for 1985-90.

Note: Totals do not necessarily equal the sums of rounded components.

For several of the years included in the table, significant legislative changes or definitional changes have affected the estimated actuarial balance. In 1985, for example, the estimated actuarial balance changed largely because of an adjustment made to the method for estimating the age distribution of immigrants.

Rebenchmarking of the National Income and Product Accounts, and changes in demographic assumptions contributed to the change in actuarial balance for 1987. Various changes in assumptions and methods for the 1988 report had roughly offsetting effects on the actuarial balance. In 1989 and 1990, changes in economic assumptions accounted for most of the changes in the estimated actuarial balance. In 1991, the effect of legislation, changes in economic assumptions, and the introduction of the cost of reaching and maintaining an ending trust fund target combined to produce the change in actuarial balance. In 1992, changes in disability assumptions and the method for projecting average benefit levels accounted for most of the change in the actuarial balance. In 1993, numerous small changes in assumptions and methods had offsetting effects on the actuarial balance. In 1994, changes in the real-wage assumption, disability rates, and the earnings sample used for projecting average benefit levels accounted for most of the change in the actuarial balance. Changes affecting the actuarial balance shown for the 1995 report are described in section II.F2 of this report.

E. ACTUARIAL ANALYSIS OF BENEFIT DISBURSEMENTS FROM THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE TRUST FUND WITH RESPECT TO DISABLED BENEFICIARIES

(Required by section 201(c) of the Social Security Act)

Effective January 1957, monthly benefits have been payable from the OASI Trust Fund to disabled children aged 18 and over of retired and deceased workers in those cases for which the disability began before age 18. The age before which disability is required to have begun was subsequently changed to age 22. Effective February 1968, reduced monthly benefits have been payable from this trust fund to disabled widows and widowers at ages 50 and above. Effective January 1991, the requirements for the disability of the widow or widower were made less restrictive.

On December 31, 1994, about 758,000 persons were receiving monthly benefits from the OASI Trust Fund because of their disabilities or the disabilities of children. This total includes 47,000 mothers and fathers (wives or husbands under age 65 of retired-worker beneficiaries and widows or widowers of deceased insured workers) who met all other qualifying requirements and were receiving unreduced benefits solely because they had disabled-child beneficiaries (or disabled children aged 16 or 17) in their care. Benefits paid from this trust fund to the persons described above totaled $3,973 million in calendar year 1994. Table III.E1 shows these and similar figures for selected calendar years during 1960-94, and estimated experience for 1995-2004 based on the intermediate set of assumptions.

TABLE III.E1.—BENEFIT DISBURSEMENTS FROM THE OASI TRUST FUND WITH RESPECT TO DISABLED BENEFICIARIES, SELECTED CALENDAR YEARS 1960-1994, AND ESTIMATED FUTURE DISBURSEMENTS DURING 1995-2004 BASED ON INTERMEDIATE ASSUMPTIONS

[Beneficiaries in thousands; benefit payments in millions]

Calendar year	Disabled beneficiaries, end of year			Amount of benefit payments[1]		
	Total	Children[2]	Widows-widowers[3]	Total	Children[2]	Widows-widowers[4]
Historical data:						
1960	117	117	—	$59	$59	—
1965	214	214	—	134	134	—
1970	316	281	36	301	260	$41
1975	435	376	58	664	560	104
1980	519	460	59	1,223	1,097	126
1985	594	547	47	2,072	1,885	187
1986	614	565	49	2,219	2,022	197
1987	629	580	49	2,331	2,128	203
1988	633	584	49	2,518	2,307	211
1989	651	602	49	2,680	2,459	221
1990	662	613	49	2,882	2,649	233
1991	687	627	61	3,179	2,875	304
1992	715	643	72	3,459	3,079	380
1993	740	659	81	3,752	3,296	456
1994	758	671	86	3,973	3,481	492
Estimates:						
1995	785	690	95	4,254	3,693	562
1996	802	708	94	4,512	3,930	582
1997	820	726	94	4,789	4,185	603
1998	837	743	94	5,087	4,459	628
1999	853	761	93	5,400	4,753	647
2000	869	777	91	5,734	5,066	667
2001	883	794	90	6,079	5,394	684
2002	896	809	87	6,447	5,749	698
2003	909	824	85	6,833	6,123	710
2004	920	838	82	7,235	6,512	722

[1]Beginning in 1966, includes payments for vocational rehabilitation services.

[2]Also includes certain mothers and fathers (see text).

[3]In 1984 and later years, only disabled widows and widowers aged 50-59 are included because disabled widows and widowers aged 60-64 would be eligible for the same benefit as a nondisabled aged widow or widower; therefore, they are not receiving benefits solely because of a disability.

[4]In 1983 and prior years, reflects the offsetting effect of lower benefits payable to disabled widows and widowers who continue to receive benefits after attaining age 60 (62, for disabled widowers, prior to 1973) as compared to the higher nondisabled widow's and widower's benefits that would otherwise be payable. In 1984 and later years, only benefit payments to disabled widows and widowers aged 50-59 are included (see footnote 3).

Note: Totals do not necessarily equal the sums of rounded components.

Total benefit payments from the OASI Trust Fund with respect to disabled beneficiaries are estimated to increase from $4,254 million in calendar year 1995 to $7,235 million in calendar year 2004, based on the intermediate assumptions.

In calendar year 1994, benefit payments (including expenditures for vocational rehabilitation services) with respect to disabled persons from the OASI Trust Fund and from the DI Trust Fund (including

payments from the latter fund to all children and spouses of disabled-worker beneficiaries) totaled $41,730 million. Of this amount, $3,973 million or 9.5 percent represented payments from the OASI Trust Fund. These and similar figures for selected calendar years during 1960-94 and estimates for calendar years 1995-2004 are presented in table III.E2.

TABLE III.E2.—BENEFIT DISBURSEMENTS UNDER THE OASDI PROGRAM WITH RESPECT TO DISABLED BENEFICIARIES, BY TRUST FUND, SELECTED CALENDAR YEARS 1960-1994, AND ESTIMATED FUTURE DISBURSEMENTS DURING 1995-2004 BASED ON INTERMEDIATE ASSUMPTIONS

[Amounts in millions]

Calendar year	Total[1]	DI Trust Fund[2]	OASI Trust Fund	
			Amount[3]	Percentage of total
Historical data:				
1960	$627	$568	$59	9.4
1965	1,707	1,573	134	7.9
1970	3,386	3,085	301	8.9
1975	9,169	8,505	664	7.2
1980	16,738	15,515	1,223	7.3
1985	20,908	18,836	2,072	9.9
1986	22,075	19,856	2,219	10.1
1987	22,858	20,527	2,331	10.2
1988	24,226	21,708	2,518	10.4
1989	25,591	22,911	2,680	10.5
1990	27,717	24,835	2,882	10.4
1991	30,877	27,698	3,179	10.3
1992	34,583	31,124	3,459	10.0
1993	38,378	34,626	3,752	9.8
1994	41,730	37,757	3,973	9.5
Estimates:				
1995	45,814	41,560	4,254	9.3
1996	49,628	45,116	4,512	9.1
1997	53,597	48,809	4,789	8.9
1998	57,783	52,695	5,087	8.8
1999	62,490	57,091	5,400	8.6
2000	67,481	61,748	5,734	8.5
2001	72,806	66,727	6,079	8.3
2002	78,573	72,126	6,447	8.2
2003	84,972	78,139	6,833	8.0
2004	92,028	84,793	7,235	7.9

[1]Beginning in 1966, includes payments for vocational rehabilitation services.

[2]Benefit payments to disabled workers and their children and spouses.

[3]Benefit payments to disabled children aged 18 and over, to certain mothers and fathers (see text), and to disabled widows and widowers (see footnote 4, table III.E1).

Note: Totals do not necessarily equal the sums of rounded components.

F. FEDERAL REGISTER NOTICE

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Office of the Secretary

1995 Cost-of-Living Increase and Other Determinations

AGENCY: Social Security Administration, HHS.

ACTION: Notice.

SUMMARY: The Secretary has determined—

(1) A 2.8 percent cost-of-living increase in Social Security benefits under title II, effective for December 1994;

(2) An increase in the Federal Supplemental Security Income (SSI) monthly benefit amounts under title XVI for 1995 to $458 for an eligible individual, $687 for an eligible individual with an eligible spouse, and $229 for an essential person;

(3) The national average wage index (formerly, the average of the total wages) for 1993 to be $23,132.67;

(4) The Old-Age, Survivors, and Disability Insurance (OASDI) contribution and benefit base to be $61,200 for remuneration paid in 1995 and self-employment income earned in taxable years beginning in 1995;

(5) The monthly exempt amounts under the Social Security retirement earnings test for taxable years ending in calendar year 1995 to be $940 for beneficiaries age 65 through 69 and $680 for beneficiaries under age 65;

(6) The dollar amounts ("bend points") used in the benefit formula for workers who become eligible for benefits in 1995 and in the formula for computing maximum family benefits;

(7) The amount of earnings a person must have to be credited with a quarter of coverage in 1995 to be $630;

(8) The "old-law" contribution and benefit base to be $45,300 for 1995; and

(9) The OASDI fund ratio to be 116.6 percent for 1994.

FOR FURTHER INFORMATION CONTACT:

Jeffrey L. Kunkel, Office of the Actuary, Social Security Administration, 6401 Security Boulevard, Baltimore, MD 21235, (410) 965-3013. A summary of the information in this announcement is available in a recorded message by telephoning (410) 965-3053. This telephone message will be updated to reflect changes to the cost-of-living benefit increase and other determinations.

SUPPLEMENTARY INFORMATION:

The Secretary is required by the Social Security Act (the Act) to publish within 45 days after the close of the third calendar quarter of 1994 the benefit increase percentage and the revised table of "special minimum" benefits (section 215(i)(2)(D)). Also, the Secretary is required to publish on or before November 1 the national average wage index for 1993 (section 215(a)(1)(D)), the OASDI fund ratio for 1994 (section 215(i)(2)(C)(ii)), the OASDI contribution and benefit base for 1995 (section 230(a)), the amount of earnings required to be credited with a quarter of coverage in 1995 (section 213(d)(2)), the monthly exempt amounts under the Social Security retirement earnings test for 1995 (section 203(f)(8)(A)), the formula for computing a primary insurance amount for workers who first become eligible for benefits or die in 1995 (section 215(a)(1)(D)), and the formula for computing the maximum amount of benefits payable to the family of a worker who first becomes eligible for old-age benefits or dies in 1995 (section 203(a)(2)(C)).

Cost-of-Living Increases

General. The cost-of-living increase is 2.8 percent for benefits under titles II and XVI of the Act.

Under title II, OASDI benefits will increase by 2.8 percent beginning with the December 1994 benefits, which are payable on January 3, 1995. This increase is based on the authority contained in section 215(i) of the Act (42 U.S.C. 415(i)).

Under title XVI, Federal SSI payment levels will also increase by 2.8 percent effective for payments made for the month of January 1995 but paid on December 30, 1994. This is based on the authority contained in section 1617 of the Act (42 U.S.C. 1382f). The percentage increase effective January 1995 is the same as the title II percentage increase and the annual payment amount is rounded, when not a multiple of $12, to the next lower multiple of $12.

Automatic Benefit Increase Computation. Under section 215(i) of the Act, the third calendar quarter of 1994 is a cost-of-living computation quarter for all the purposes of the Act. The Secretary is, therefore, required to increase benefits, effective with December 1994, for individuals entitled under section 227 or 228 of the Act, to increase primary insurance amounts of all other individuals entitled under title II of the Act, and to increase maximum benefits payable to a family. For December 1994, the benefit increase is the percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers from the third

quarter of 1993 through the third quarter of 1994.

Section 215(i)(1) of the Act provides that the Consumer Price Index for a cost-of-living computation quarter shall be the arithmetic mean of this index for the 3 months in that quarter. The Department of Labor's Consumer Price Index for Urban Wage Earners and Clerical Workers for each month in the quarter ending September 30, 1993, was: for July 1993, 142.1; for August 1993, 142.4; and for September 1993, 142.6. The arithmetic mean for this calendar quarter is 142.4 (after rounding to the nearest 0.1). The corresponding Consumer Price Index for each month in the quarter ending September 30, 1994, was: for July 1994, 145.8; for August 1994, 146.5; and for September 1994, 146.9. The arithmetic mean for this calendar quarter is 146.4. Thus, because the Consumer Price Index for the calendar quarter ending September 30, 1994, exceeds that for the calendar quarter ending September 30, 1993 by 2.8 percent, a cost-of-living benefit increase of 2.8 percent is effective for benefits under title II of the Act beginning December 1994.

Title II Benefit Amounts. In accordance with section 215(i) of the Act, in the case of insured workers and family members for whom eligibility for benefits (i.e., the worker's attainment of age 62, or disability or death before age 62) occurred before 1995, benefits will increase by 2.8 percent beginning with benefits for December 1994 which are payable on January 3, 1995. In the case of first eligibility after 1994, the 2.8 percent increase will not apply.

For eligibility after 1978, benefits are generally determined by a benefit formula provided by the Social Security Amendments of 1977 (Pub. L. 95-216), as described later in this notice.

For eligibility before 1979, benefits are determined by means of a benefit table. In accordance with section 215(i)(4) of the Act, the primary insurance amounts and the maximum family benefits shown in this table are revised by (1) increasing by 2.8 percent the corresponding amounts established by the last cost-of-living increase and the last extension of the benefit table made under section 215(i)(4) (to reflect the increase in the OASDI contribution and benefit base for 1994); and (2) by extending the table to reflect the higher monthly wage and related benefit amounts now possible under the increased contribution and benefit base for 1995, as described later in this notice. A copy of this table may be obtained by writing to: Social Security Administration, Office of Public Inquiries, 4100 Annex, Baltimore, MD 21235.

Section 215(i)(2)(D) of the Act also requires that, when the Secretary determines an automatic increase in Social Security benefits, the Secretary shall publish in the FEDERAL REGISTER a revision of the range of the primary insurance amounts and corresponding maximum family benefits based on the dollar amount and other provisions described in section 215(a)(1)(C)(i). These benefits are referred to as "special minimum" benefits and are payable to certain individuals with long periods of relatively low earnings. To qualify for such benefits, an individual must have at least 11 "years of coverage." To earn a year of coverage for purposes of the special minimum, a person must earn at least a certain proportion (25 percent for years before 1991, and 15 percent for years after 1990) of the "old-law" contribution and benefit base. In accordance with section 215(a)(1)(C)(i), the table below shows the revised range of primary insurance amounts and corresponding maximum family benefit amounts after the 2.8 percent benefit increase.

SPECIAL MINIMUM PRIMARY INSURANCE AMOUNTS AND MAXIMUM FAMILY BENEFITS

Primary insurance amount payable for Dec. 1993	No. of years required minimum earnings level	Primary insurance amount payable for Dec. 1994	Maximum family benefit payable for Dec. 1994
$25.10	11	$25.80	$38.80
50.10	12	51.50	77.80
75.60	13	77.70	116.90
100.80	14	103.60	155.70
126.00	15	129.50	194.30
151.30	16	155.50	233.80
176.60	17	181.50	272.80
202.00	18	207.60	311.60
227.20	19	233.50	350.60
252.30	20	259.30	389.50
277.90	21	285.60	428.70
303.00	22	311.40	467.60
328.50	23	337.60	507.20
353.70	24	363.60	545.90
378.90	25	389.50	584.60
404.40	26	415.70	624.20
429.70	27	441.70	663.00
454.80	28	467.50	701.80
480.00	29	493.40	740.90
505.30	30	519.40	779.70

Section 227 of the Act provides flat-rate benefits to a worker who became age 72 before 1969 and was not insured under the usual requirements, and to his or her spouse or surviving spouse. Section 228 of the Act provides similar benefits at age 72 for certain uninsured persons. The current monthly benefit amount of $183.40 for an individual under sections 227 and 228 of the Act is increased by 2.8 percent to obtain the new amount of $188.50. The present monthly benefit amount of $91.80 for a spouse under section 227 is increased by 2.8 percent to $94.30.

Title XVI Benefit Amounts. In accordance with section 1617 of the Act, Federal SSI benefit amounts for the aged, blind, and disabled are increased by 2.8 percent effective January 1995. Therefore, the yearly Federal SSI benefit amounts of $5,352 for an eligible individual, $8,028 for an eligible individual with an eligible spouse, and $2,676 for an essential person, which became effective January 1994, are increased, effective January 1995, to $5,496, $8,244, and $2,748, respectively, after rounding. The corresponding monthly amounts for 1995 are determined by dividing the yearly amounts by 12, giving $458, $687, and $229, respectively. The monthly amount is reduced by subtracting monthly countable income. In the case of an eligible individual with an eligible spouse, the amount payable is further divided equally between the two spouses.

National Average Wage Index for 1993

General. Under various provisions of the Act, several amounts are scheduled to increase automatically for 1995. These include (1) the OASDI contribution and benefit base, (2) the retirement test exempt amounts, (3) the dollar amounts, or "bend points," in the primary insurance amount and maximum family benefit formulas, (4) the amount of earnings required for a worker to be credited with a quarter of coverage, and (5) the "old law" contribution and benefit base (as determined under section 230 of the Act as in effect before the 1977 amendments). These amounts are based on the annual increase in the average of the total wages. Section 321(e) of the "Social Security Independence and Program Improvements Act of 1994" (Pub. L. 103-296), enacted August 15, 1994, provided the name "national average wage index" for the average of the total wages. This new designation will be used throughout this notice.

Section 321(g) of the new legislation also revised the formula used to determine the OASDI contribution and benefit base, the retirement test exempt amounts, and the old-law contribution and benefit base. Under the old formula, the determination in a given year of the next year's amount was the product of the current year's amount and the ratio of (1) the prior year's national average wage index to (2) the second prior year's average wage index. (For example, the determination of the 1995 contribution and benefit base under the old formula would have been the product of the 1994 base times the ratio of the 1993 national average wage index to the 1992 average wage index.)

The revised formula differs from the old formula in that the current year's amount is replaced by the amount in effect for 1994 and the national average wage index for the second prior year is replaced by the 1992 national average wage index. Thus, the revised formula can be stated as follows: the determination in a given year of the next year's amount is the product of the 1994 amount and the ratio of (1) the prior year's national average wage index to (2) the 1992 national average wage index.

Under both the old and the revised formula, the resulting dollar amounts are rounded—to the nearest multiple of $300 in the case of each of the two types of contribution and benefit bases, and to the nearest $10 in the case of the monthly retirement test exempt amounts. By using fixed amounts in the revised formula, cumulative rounding distortions are eliminated.

For the first determinations under the

revised formula, the resulting amounts are the same as those that would have been determined under the old formula. For subsequent determinations, this may not be the case.

Computation. The determination of the national average wage index for calendar year 1993 is based on the 1992 national average wage index of $22,935.42 announced in the FEDERAL REGISTER on October 28, 1993 (58 FR 58004), along with the percentage increase in average wages from 1992 to 1993 measured by annual wage data tabulated by the Social Security Administration (SSA). The wage data tabulated by SSA include contributions to deferred compensation plans, as required by section 209(k) of the Act. The average amounts of wages calculated directly from this data were $22,001.92 and $22,191.14 for 1992 and 1993, respectively. To determine the national average wage index for 1993 at a level that is consistent with the national average wage indexing series for 1951 through 1977 (published December 29, 1978, at 43 FR 61016), we multiplied the 1992 national average wage index of $22,935.42 by the percentage increase in average wages from 1992 to 1993 (based on SSA-tabulated wage data) as follows (with the result rounded to the nearest cent):

Amount. The national average wage index for 1993 is $22,935.42 times $22,191.14 divided by $22,001.92, which equals $23,132.67. Therefore, the national average wage index for calendar year 1993 is determined to be $23,132.67.

OASDI Contribution and Benefit Base

General. The OASDI contribution and benefit base is $61,200 for remuneration paid in 1995 and self-employment income earned in taxable years beginning in 1995.

The OASDI contribution and benefit base serves two purposes:

(a) It is the maximum annual amount of earnings on which OASDI taxes are paid. The OASDI tax rate for remuneration paid in 1995 is set by statute at 6.2 percent for employees and employers, each. The OASDI tax rate for self-employment income earned in taxable years beginning in 1995 is 12.4 percent. (The Hospital Insurance tax is due on remuneration, without limitation, paid in 1995, at the rate of 1.45 percent for employees and employers, each, and on self-employment income earned in taxable years beginning in 1995, at the rate of 2.9 percent.)

(b) It is the maximum annual amount used in determining a person's OASDI benefits.

Computation. Section 321(g) of the "Social Security Independence and Program Improvements Act of 1994" amended section 230(b) of the Act. As noted above, the amendment provided a technical change to the formula used to determine the OASDI contribution and benefit base. Under the revised formula, the base for 1995 shall be equal to the larger of the current base ($60,600) or the 1994 base of $60,600 multiplied by the ratio of the national average wage index for 1993 to that for 1992. If the amount so determined is not a multiple of $300, it shall be rounded to the nearest multiple of $300.

Amount. The ratio of the national average wage index for 1993, $23,132.67 as determined above, compared to that for 1992, $22,935.42, is 1.0086002. Multiplying the 1994 OASDI contribution and benefit base amount of $60,600 by the ratio of 1.0086002 produces the amount of $61,121.17 which must then be rounded to $61,200. Accordingly, the OASDI contribution and benefit base is determined to be $61,200 for 1995.

Retirement Earnings Test Exempt Amounts

General. Social Security benefits are withheld when a beneficiary under age 70 has earnings in excess of the retirement earnings test exempt amount. A formula for determining the monthly exempt amounts is provided in section 203(f)(8)(B) of the Act. The 1994 monthly exempt amounts were determined by the formula to be $930 for beneficiaries aged 65-69 and $670 for beneficiaries under age 65. Thus, the annual exempt amounts for 1994 were set at $11,160 and $8,040, respectively. For beneficiaries aged 65-69, $1 in benefits is withheld for every $3 of earnings in excess of the annual exempt amount. For beneficiaries under age 65, $1 in benefits is withheld for every $2 of earnings in excess of the annual exempt amount.

Computation. Section 321(g) of the "Social Security Independence and Program Improvements Act of 1994" also amended the indexing formula provided in section 203(f)(8)(B) of the Act. Under the revised formula, each monthly exempt amount for 1995 shall be the larger of the corresponding 1994 monthly exempt amount or the corresponding 1994 monthly exempt amount multiplied by the ratio of the national average wage index for 1993 to that for 1992. The ratio of the national average wage index for 1993, $23,132.67 as determined above, compared to that for 1992, $22,935.42, is 1.0086002. Section 203(f)(8)(B) further provides that if the amount so determined is not a multiple of $10, it shall be rounded to the nearest multiple of $10.

Exempt Amount for Beneficiaries Aged 65 Through 69. Multiplying the 1994 retirement earnings test monthly exempt amount of $930 by the ratio of 1.0086002 produces the amount of $938.00. This must

then be rounded to $940. The retirement earnings test monthly exempt amount for beneficiaries aged 65 through 69 is determined to be $940 for 1995. The corresponding retirement earnings test annual exempt amount for these beneficiaries is $11,280.

Exempt Amount for Beneficiaries Under Age 65. Multiplying the 1994 retirement earnings test monthly exempt amount of $670 by the ratio 1.0086002 produces the amount of $675.76. This must then be rounded to $680. The retirement earnings test monthly exempt amount for beneficiaries under age 65 is thus determined to be $680 for 1995. The corresponding retirement earnings test annual exempt amount for these beneficiaries is $8,160.

Computing Benefits After 1978

General. The Social Security Amendments of 1977 provided a method for computing benefits which generally applies when a worker first becomes eligible for benefits after 1978. This method uses the worker's "average indexed monthly earnings" to compute the primary insurance amount. The computation formula is adjusted automatically each year to reflect changes in general wage levels, as measured by the national average wage index.

A worker's earnings are adjusted, or "indexed," to reflect the change in general wage levels that occurred during the worker's years of employment. Such indexation ensures that a worker's future benefits reflect the general rise in the standard of living that occurs during his or her working lifetime. A certain number of years of earnings are needed to compute the average indexed monthly earnings. After the number of years is determined, those years with the highest indexed earnings are chosen, the indexed earnings are summed, and the total amount is divided by the total number of months in those years. The resulting average amount is then rounded down to the next lower dollar amount. The result is the average indexed monthly earnings.

For example, to compute the average indexed monthly earnings for a worker attaining age 62, becoming disabled before age 62, or dying before attaining age 62, in 1995, the national average wage index for 1993, $23,132.67, is divided by the national average wage index for each year prior to 1993 in which the worker had earnings. The actual wages and self-employment income, as defined in section 211(b) of the Act and credited for each year, is multiplied by the corresponding ratio to obtain the worker's indexed earnings for each year before 1993. Any earnings in 1993 or later are considered at face value, without indexing. The average indexed monthly earnings is then computed and used to determine the worker's primary insurance amount for 1995.

Computing the Primary Insurance Amount. The primary insurance amount is the sum of three separate percentages of portions of the average indexed monthly earnings. In 1979 (the first year the formula was in effect), these portions were the first $180, the amount between $180 and $1,085, and the amount over $1,085. The dollar amounts in the formula which govern the portions of the average indexed monthly earnings are frequently referred to as the "bend points" of the formula. Thus, the bend points for 1979 were $180 and $1,085.

The bend points for 1995 are obtained by multiplying the corresponding 1979 bend-point amounts by the ratio between the national average wage index for 1993, $23,132.67, and for 1977, $9,779.44. These results are then rounded to the nearest dollar. For 1995, the ratio is 2.3654391. Multiplying the 1979 amounts of $180 and $1,085 by 2.3654391 produces the amounts of $425.78 and $2,566.50. These must then be rounded to $426 and $2,567. Accordingly, the portions of the average indexed monthly earnings to be used in 1995 are determined to be the first $426, the amount between $426 and $2,567, and the amount over $2,567.

Consequently, for individuals who first become eligible for old-age insurance benefits or disability insurance benefits in 1995, or who die in 1995 before becoming eligible for benefits, we will compute their primary insurance amount by adding the following:

(a) 90 percent of the first $426 of their average indexed monthly earnings, plus

(b) 32 percent of the average indexed monthly earnings over $426 and through $2,567, plus

(c) 15 percent of the average indexed monthly earnings over $2,567.

This amount is then rounded to the next lower multiple of $.10 if it is not already a multiple of $.10. This formula and the adjustments we have described are contained in section 215(a) of the Act (42 U.S.C. 415(a)).

Maximum Benefits Payable to a Family

General. The 1977 amendments continued the long established policy of limiting the total monthly benefits which a worker's family may receive based on his or her primary insurance amount. Those amendments also continued the then existing relationship between maximum family benefits and primary insurance amounts but did change the method of computing the maximum amount of benefits which may be paid to a worker's family. The

Social Security Disability Amendments of 1980 (Pub. L. 96-265) established a new formula for computing the maximum benefits payable to the family of a disabled worker. This new formula is applied to the family benefits of workers who first become entitled to disability insurance benefits after June 30, 1980, and who first become eligible for these benefits after 1978. The new formula was explained in a final rule published in the FEDERAL REGISTER on May 8, 1981, at 46 FR 25601. For disabled workers initially entitled to disability benefits before July 1980, or whose disability began before 1979, the family maximum payable is computed the same as the old-age and survivor family maximum.

Computing the Old-Age and Survivor Family Maximum. The formula used to compute the family maximum is similar to that used to compute the primary insurance amount. It involves computing the sum of four separate percentages of portions of the worker's primary insurance amount. In 1979, these portions were the first $230, the amount between $230 and $332, the amount between $332 and $433, and the amount over $433. The dollar amounts in the formula which govern the portions of the primary insurance amount are frequently referred to as the "bend points" of the family-maximum formula. Thus, the bend points for 1979 were $230, $332, and $433.

The bend points for 1995 are obtained by multiplying the corresponding 1979 bend-point amounts by the ratio between the national average wage index for 1993, $23,132.67, and the average for 1977, $9,779.44. This amount is then rounded to the nearest dollar. For 1995, the ratio is 2.3654391. Multiplying the amounts of $230, $332, and $433 by 2.3654391 produces the amounts of $544.05, $785.33, and $1,024.24. These amounts are then rounded to $544, $785, and $1,024. Accordingly, the portions of the primary insurance amounts to be used in 1995 are determined to be the first $544, the amount between $544 and $785, the amount between $785 and $1,024, and the amount over $1,024.

Consequently, for the family of a worker who becomes age 62 or dies in 1995 before age 62, the total amount of benefits payable to them will be computed so that it does not exceed:

(a) 150 percent of the first $544 of the worker's primary insurance amount, plus

(b) 272 percent of the worker's primary insurance amount over $544 through $785, plus

(c) 134 percent of the worker's primary insurance amount over $785 through $1,024, plus

(d) 175 percent of the worker's primary insurance amount over $1,024.

This amount is then rounded to the next lower multiple of $.10 if it is not already a multiple of $.10. This formula and the adjustments we have described are contained in section 203(a) of the Act (42 U.S.C. 403(a)).

Quarter of Coverage Amount

General. The 1995 amount of earnings required for a quarter of coverage is $630. A quarter of coverage is the basic unit for determining whether a worker is insured under the Social Security program. For years before 1978, an individual generally was credited with a quarter of coverage for each quarter in which wages of $50 or more were paid, or an individual was credited with 4 quarters of coverage for every taxable year in which $400 or more of self-employment income was earned. Beginning in 1978, wages generally are no longer reported on a quarterly basis; instead, annual reports are made. With the change to annual reporting, section 352(b) of the Social Security Amendments of 1977 (Pub. L. 95-216) amended section 213(d) of the Act to provide that a quarter of coverage would be credited for each $250 of an individual's total wages and self-employment income for calendar year 1978 (up to a maximum of 4 quarters of coverage for the year).

Computation. Under the prescribed formula, the quarter of coverage amount for 1995 shall be equal to the larger of the current amount of $620 or the 1978 amount of $250 multiplied by the ratio of the national average wage index for 1993 to that for 1976. The national average wage index for 1976 was previously determined to be $9,226.48. This was published in the FEDERAL REGISTER on December 29, 1978, at 43 FR 61016. The average wage index for 1993 is $23,132.67 as determined above. Section 213(d) further provides that if the amount so determined is not a multiple of $10, it shall be rounded to the nearest multiple of $10.

Quarter of Coverage Amount. The ratio of the national average wage index for 1993, $23,132.67, compared to that for 1976, $9,226.48, is 2.5072043. Multiplying the 1978 quarter of coverage amount of $250 by the ratio of 2.5072043 produces the amount of $626.80, which must then be rounded to $630. Accordingly, the quarter of coverage amount is determined to be $630 for 1995.

"Old-Law" Contribution and Benefit Base

General. The 1995 "old-law" contribution and benefit base is $45,300. This is the base that would have been effective under the Act

without the enactment of the 1977 amendments. The base is computed under section 230(b) of the Act as it read prior to the 1977 amendments.

The "old-law" contribution and benefit base is used by:

(a) the Railroad Retirement program to determine certain tax liabilities and tier II benefits payable under that program to supplement the tier I payments which correspond to basic Social Security benefits,

(b) the Pension Benefit Guaranty Corporation to determine the maximum amount of pension guaranteed under the Employee Retirement Income Security Act (as stated in section 230(d) of the Act),

(c) Social Security to determine a year of coverage in computing the special minimum benefit, as described earlier, and

(d) Social Security to determine a year of coverage (acquired whenever earnings equal or exceed 25 percent of the "old-law" base for this purpose only) in computing benefits for persons who are also eligible to receive pensions based on employment not covered under section 210 of the Act.

Computation. The base is computed using the automatic adjustment formula in section 230(b) of the Act as it read prior to the enactment of the 1977 amendments, but with the revised indexing formula introduced by section 321(g) of the "Social Security Independence and Program Improvements Act of 1994." Under the formula, the "old-law" contribution and benefit base shall be the larger of the current "old-law" base ($45,000) or the 1994 "old-law" base ($45,000) multiplied by the ratio of the national average wage index for 1993 to that for 1992. If the amount so determined is not a multiple of $300, it shall be rounded to the nearest multiple of $300.

Amount. The ratio of the national average wage index for 1993, $23,132.67 as determined above, compared to that for 1992, $22,935.42, is 1.0086002. Multiplying the 1994 "old-law" contribution and benefit base amount of $45,000 by the ratio of 1.0086002 produces the amount of $45,387.01 which must then be rounded to $45,300. Accordingly, the "old-law" contribution and benefit base is determined to be $45,300 for 1995.

OASDI Fund Ratio

General. Section 215(i) of the Act provides for automatic cost-of-living increases in OASDI benefit amounts. This section also includes a "stabilizer" provision that can limit the automatic OASDI benefit increase under certain circumstances. If the combined assets of the OASI and DI Trust Funds, as a percentage of annual expenditures, are below a specified threshold, the automatic benefit increase is equal to the lesser of (1) the increase in the national average wage index or (2) the increase in prices. The threshold specified for the OASDI fund ratio is 20.0 percent for benefit increases for December of 1989 and later. The law also provides for subsequent "catch-up" benefit increases for beneficiaries whose previous benefit increases were affected by this provision. "Catch-up" benefit increases can occur only when trust fund assets exceed 32.0 percent of annual expenditures.

Computation. Section 215(i) specifies the computation and application of the OASDI fund ratio. The OASDI fund ratio for 1994 is the ratio of (1) the combined assets of the OASI and DI Trust Funds at the beginning of 1994 to (2) the estimated expenditures of the OASI and DI Trust Funds during 1994, excluding transfer payments between the OASI and DI Trust Funds, and reducing any transfers to the Railroad Retirement Account by any transfers from that account into either trust fund.

Ratio. The combined assets of the OASI and DI Trust Funds at the beginning of 1994 equaled $378,285 million, and the expenditures are estimated to be $324,516 million. Thus, the OASDI fund ratio for 1994 is 116.6 percent, which exceeds the applicable threshold of 20.0 percent. Therefore, the stabilizer provision does not affect the benefit increase for December 1994. Although the OASDI fund ratio exceeds the 32.0-percent threshold for potential "catch-up" benefit increases, no past benefit increase has been reduced under the stabilizer provision. Thus, no "catch-up" benefit increase is required.

Dated: October 25, 1994

Donna E. Shalala,

Secretary of Health and Human Services

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G. GLOSSARY

Actuarial balance. The difference between the summarized income rate and the summarized cost rate over a given valuation period.

Actuarial deficit. A negative actuarial balance.

Adjusted gross income—AGI. Amount of income potentially subject to Federal income taxation, before consideration of exemptions and deductions.

Administrative expenses. Expenses incurred by the Department of Health and Human Services and the Department of the Treasury in administering the OASDI program and the provisions of the Internal Revenue Code relating to the collection of contributions. Such administrative expenses are paid from the OASI and DI Trust Funds.

Advance tax transfers. Amounts representing the estimated total OASDI tax contributions for a given month. From May 1983 through November 1990, such amounts were credited to the OASI and DI Trust Funds at the beginning of each month. Reimbursements were made from the trust funds to the general fund of the Treasury for the associated loss of interest. Advance tax transfers are no longer made unless needed in order to pay benefits.

Advisory Council on Social Security. Prior to the enactment of the Social Security Independence and Program Improvements Act of 1994 (Public Law 103-296) on August 15, 1994, the Social Security Act provided for the appointment of an Advisory Council every 4 years to study and review the financial status of the OASDI and Medicare programs. The most recent Advisory Council was appointed on June 9, 1994, and is currently reviewing the financial status of the OASDI program. Under the provisions of Public Law 103-296, this is the last Advisory Council to be appointed.

Alternatives I, II, or III. See "Assumptions."

Annual balance. The difference between the income rate and the cost rate in a given year.

Assets. Treasury notes and bonds, other securities guaranteed by the Federal Government, certain Federally sponsored agency obligations, and cash, held by the trust funds for investment purposes.

Assumptions. Values relating to future trends in certain key factors which affect the balance in the trust funds. Demographic assumptions include fertility, mortality, net immigration, marriage, divorce, retirement patterns, disability incidence and termination rates, and changes in the labor force. Economic assumptions include unemployment, average earnings, inflation, interest rates, and productivity. Three sets of economic assumptions are presented in the Trustees Report—

(1) Alternative I is characterized as a "low cost" set—it assumes relatively rapid economic growth, low inflation, and favorable

(from the standpoint of program financing) demographic conditions.

(2) Alternative II is the "intermediate" set of assumptions, and represents the Trustees' "best estimates" of likely future economic and demographic conditions.

(3) Alternative III, characterized as a "high cost" set, assumes slow economic growth, more rapid inflation, and financially disadvantageous demographic conditions.

See tables II.D1 and II.D2.

Automatic cost-of-living increase. The annual increase in benefits, effective for December, reflecting the increase in the cost of living. The benefit increase equals the percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers measured from the average over July, August, and September of the preceding year to the average for the same 3 months in the current year. If the increase is less than one-tenth of 1 percent, when rounded, there is no automatic increase for the current year; the increase for the next year would reflect the increase in the cost of living over a 2-year period. See table II.E2. If the "stabilizer provision" applies, the increase may be less than the cost of living.

Auxiliary beneficiary. Monthly benefits payable to a spouse or child of a retired or disabled worker, or to a survivor of a deceased worker.

Average indexed monthly earnings—AIME. The amount of earnings used in determining the primary insurance amount (PIA) for most workers who attain age 62, become disabled, or die after 1978. A worker's actual past earnings are adjusted by changes in the "average wage index," in order to bring them up to their approximately equivalent value at the time of retirement or other eligibility for benefits.

Average wage index. The average amount of total wages for each year after 1950, including wages in noncovered employment and wages in covered employment in excess of the OASDI contribution and benefit base. These amounts are used to index the earnings of most workers first becoming eligible for benefits in 1979 or later, and for automatic adjustments in the contribution and benefit base, bend points, earnings test exempt amounts, and other wage-indexed amounts. See tables II.E1, II.E2, and III.B1.

Award. An administrative determination that an individual is entitled to receive a specified type of OASDI benefit. Awards can represent not only new entrants to the benefit rolls but also persons already on the rolls who become entitled to a different type of benefit.

Awards usually result in the immediate payment of benefits, although payments may be deferred or withheld depending on the individual's particular circumstances.

Baby boom. The period from the end of World War II through the mid-1960s marked by unusually high birth rates.

Bend points. The dollar amounts defining the AIME or PIA brackets

in the benefit formulas. For the bend points for years 1979 and later, see table II.E3.

Beneficiary. A person who has been awarded benefits on the basis of his or her own or another's earnings record. The benefits may be either in current-payment status or withheld.

Benefit award. See "Award."

Benefit payments. The amounts disbursed for OASI and DI benefits by the Department of the Treasury in specified periods.

Benefit termination. See "Termination."

Best estimate assumptions. See "Assumptions."

Board of Trustees. A Board established by the Social Security Act to oversee the financial operations of the Federal Old-Age and Survivors Insurance Trust Fund and the Federal Disability Insurance Trust Fund. The Board is composed of six members, four of whom serve automatically by virtue of their positions in the Federal Government: the Secretary of the Treasury, who is the Managing Trustee, the Secretary of Labor, the Secretary of Health and Human Services, and the Commissioner of Social Security. The other two members are appointed by the President and confirmed by the Senate to serve as public representatives. Stanford G. Ross and David M. Walker began serving 4-year terms on October 2, 1990. They have continued serving through the issuance of this report under the provision of the Social Security Act that allows a public representative whose term has expired to continue in the position until the earlier of the time at which a successor takes office or the Board's next annual report is issued. The Commissioner of Social Security became a member of the Board effective March 31, 1995, under Public Law 103-296, signed on August 15, 1994.

Book value. A bond's value between its price at purchase and its value at maturity. Book value is calculated as par value plus unamortized premium, if purchased at a price above its par value, or less unamortized discount, if purchased below par.

COLA. See "Automatic cost-of-living increase."

Constant dollars. One or more financial amounts adjusted by the CPI to a constant year as a reference point.

Consumer Price Index—CPI. Relative measure of inflation. In this report, all references to the CPI relate to the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). See table II.D1.

Contribution and benefit base. Annual dollar amount above which earnings in employment covered under the OASDI program are neither taxable nor creditable for benefit computation purposes. (Also referred to as "maximum contribution and benefit base," "annual

creditable maximum," "taxable maximum," and "maximum taxable.") See tables II.B1 and II.E2. See also, "HI contribution base."

Contributions. The amount based on a percent of earnings, up to an annual maximum, that must be paid by—

(1) employers and employees on wages from employment under the Federal Insurance Contributions Act,

(2) the self-employed on net earnings from self-employment under the Self-Employment Contributions Act, and

(3) States on the wages of State and local government employees covered under the Social Security Act through voluntary agreements under section 218 of the Act.

Generally, employers withhold contributions from wages, add an equal amount of contributions, and pay both on a current basis. Also referred to as "taxes."

Cost-of-living increase. See "Automatic cost-of-living increase."

Cost rate. The cost rate for a year is the ratio of the cost (also called outgo, expenditures, or disbursements) of the program to the taxable payroll for the year. In this context, the outgo is defined to include benefit payments, special monthly payments to certain uninsured persons who have 3 or more quarters of coverage (and whose payments are therefore not reimbursable from the general fund of the Treasury), administrative expenses, net transfers from the trust funds to the Railroad Retirement program under the financial-interchange provisions, and payments for vocational rehabilitation services for disabled beneficiaries; it excludes special monthly payments to certain uninsured persons whose payments are reimbursable from the general fund of the Treasury (as described above), and transfers under the interfund borrowing provisions.

Covered earnings. Earnings in employment covered by the OASDI program.

Covered employment. All employment and self-employment creditable for Social Security purposes. Almost every kind of employment and self-employment is covered under the program. In a few employment situations, for example, religious orders under a vow of poverty, foreign affiliates of American employers, or State and local governments, coverage must be elected by the employer. However, effective July 1991, coverage is mandatory for State and local employees who are not participating in a public employee retirement system. In a few situations, for example, ministers or self-employed members of certain religious groups, workers can opt out of coverage.

Covered worker. A person who has earnings creditable for Social Security purposes on the basis of services for wages in covered employment and/or on the basis of income from covered self-employment.

Current-cost financing. See "Pay-as-you-go financing."

Current dollars. Amounts expressed in nominal dollars with no adjustment for inflationary changes in the value of the dollar over time.

Current-payment status. Status of a beneficiary for whom a benefit is being paid for a given month (with or without deductions, provided

the deductions add to less than a full month's benefit). A benefit in current-payment status for a month is usually payable on the third day of the following month.

Deemed wage credit. See "Military service wage credits."

Demographic assumptions. See "Assumptions."

Disability. For Social Security purposes, the inability to engage in substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or to last for a continuous period of not less than 12 months. Special rules apply for workers age 55 or older whose disability is based on blindness.

The law generally requires that a person be disabled continuously for 5 months before he or she can qualify for a disabled-worker benefit.

Disability incidence rate. The proportion of workers in a given year, insured for but not receiving disability benefits, who apply for and are awarded disability benefits.

Disability Insurance (DI) Trust Fund. See "Trust fund."

Disability termination rate. The proportion of disabled worker beneficiaries in a given year whose disability benefits terminate as a result of the individual's recovery, death, or attainment of normal retirement age.

Disabled-worker benefit. A monthly benefit payable to a disabled worker under normal retirement age and insured for disability. Before November 1960, disability benefits were limited to disabled workers aged 50-64.

Earnings. Unless otherwise qualified, all wages from employment and net earnings from self-employment, whether or not taxable or covered.

Earnings test. The provision requiring the withholding of benefits if beneficiaries under age 70 have earnings in excess of certain exempt amounts. See table II.E2.

Economic assumptions. See "Assumptions."

Effective interest rate. See "Interest rate."

Excess wages. Wages in excess of the contribution and benefit base on which a worker initially pays taxes (usually as a result of working for more than one employer during a year). Employee taxes on excess wages are refunded to affected employees, while the employer taxes are not refunded.

Federal Insurance Contributions Act—FICA. Provision authorizing taxes on the wages of employed persons to provide for Retirement, Survivors, and Disability Insurance, and for Hospital Insurance. The tax is paid in equal amounts by workers and their employers.

Financial interchange. Provisions of the Railroad Retirement Act providing for transfers between the trust funds and the Social Security Equivalent Benefit Account of the Railroad Retirement program in order to place each trust fund in the same position it would

have been in if railroad employment had always been covered under Social Security.

Fiscal year. The accounting year of the United States Government. Since 1976, each fiscal year has begun on October 1 of the prior calendar year and ended the following September 30. For example, fiscal year 1995 began October 1, 1994 and will end September 30, 1995.

Full advance funding. A financing scheme where taxes or contributions are established to match the full cost of future benefits as these costs are incurred through current service. Such financing methods also provide for amortization over a fixed period of any financial liability that is incurred at the beginning of the program (or subsequent modification) as a result of granting credit for past service.

General fund of the Treasury. Funds held by the Treasury of the United States, other than receipts collected for a specific purpose (such as Social Security) and maintained in a separate account for that purpose.

General fund reimbursements. Transfers from the general fund of the Treasury to the trust funds for specific purposes defined in the law, including:

(1) The costs associated with providing special payments made to uninsured persons who attained age 72 before 1968, and who had fewer than 3 quarters of coverage.

(2) Payments corresponding to the employee-employer taxes on deemed wage credits for military personnel.

(3) Interest on checks which are not negotiated 6 months after the month of issue. (For checks issued before October, 1989, the principal was returned to the trust funds as a general fund reimbursement; since that time, the principal amount is automatically returned to the issuing fund when the check is uncashed after a year.)

(4) Administrative expenses incurred as a result of furnishing information on deferred vested benefits to pension plan participants, as required by the Employee Retirement Income Security Act of 1974 (Public Law 93-406).

Gross Domestic Product. The total dollar value of all goods and services produced by labor and property located in the United States, regardless of who supplies the labor or property.

Gross National Product. The total dollar value of all goods and services produced by labor and property supplied by United States residents, regardless of the location in which the production occurs.

HI contribution base. Annual dollar amount above which earnings in employment covered under the HI program are not taxable. (Also referred to as "maximum contribution base," "taxable maximum,"

and "maximum taxable.") Beginning in 1994, the HI contribution base was eliminated.

High cost assumptions. See "Assumptions."

Hospital Insurance (HI) Trust Fund. See "Trust fund."

Income rate. Ratio of income from tax revenues on a liability basis (payroll tax contributions and income from the taxation of benefits) to the OASDI taxable payroll for the year.

Inflation. An increase in the volume of money and credit relative to available goods, resulting in an increase in the general price level.

Insured status. The state or condition of having sufficient quarters of coverage to meet the eligibility requirements for retired-worker or disabled-worker benefits, or to permit the worker's spouse and children or survivors to establish eligibility for benefits in the event of his or her disability, retirement, or death. See "Quarters of coverage."

Interfund borrowing. The borrowing of assets by a trust fund (OASI, DI, or HI) from another of the trust funds when the first fund is in danger of exhaustion. Interfund borrowing was permitted by the Social Security Act only during 1982 through 1987; all amounts borrowed were to be repaid prior to the end of 1989. The only exercise of this authority occurred in 1982, when the OASI Trust Fund borrowed assets from the DI and HI Trust Funds. The final repayment of borrowed amounts occurred in 1986.

Interest. A payment in exchange for the use of money during a specified period.

Interest rate. Interest rates on new public-debt obligations issuable to Federal trust funds (see "Special public-debt obligation") are determined monthly. Such rates are set equal to the average market yield on all outstanding marketable U.S. securities not due to mature for at least 4 years from the date of the determination. See table II.D1 for historical and assumed future interest rates on new special-issue securities. The "effective" interest rate for a trust fund is the ratio of the interest earned by the fund over a given period of time to the average level of assets held by the fund during the period. The effective rate of interest thus represents a measure of the overall average interest earnings on the fund's portfolio of assets.

Intermediate assumptions. See "Assumptions."

Long range. The next 75 years. Long-range actuarial estimates are made for this period because it is approximately the maximum remaining lifetime of current Social Security participants.

Low cost assumptions. See "Assumptions."

Lump-sum death benefit. A lump sum, generally $255, payable on the death of a fully or currently insured worker. The lump sum is payable to the surviving spouse of the worker, under most circumstances, or to the worker's children.

Maximum family benefit. The maximum monthly amount that can be paid on a worker's earnings record. Whenever the total of the individual monthly benefits payable to all the beneficiaries entitled on one earnings record exceeds the maximum, each dependent's or survivor's benefit is proportionately reduced to bring the total within the maximum. Benefits payable to divorced spouses or surviving

divorced spouses are not reduced under the family maximum provision.

Medicare. A nationwide, Federally administered health insurance program authorized in 1965 to cover the cost of hospitalization, medical care, and some related services for most people over age 65, people receiving Social Security Disability Insurance payments for 2 years, and people with End-Stage Renal Disease. Medicare consists of two separate but coordinated programs— Part A (Hospital Insurance, HI) and Part B (Supplementary Medical Insurance, SMI). All persons entitled to HI are eligible to enroll in the SMI program on a voluntary basis by paying a monthly premium. Health insurance protection is available to Medicare beneficiaries without regard to income.

Military service wage credits. Credits recognizing that military personnel receive wages in kind (such as food and shelter) in addition to their basic pay and other cash payments. Noncontributory wage credits of $160 were provided for each month of active military service from September 16, 1940, through December 31, 1956. For years after 1956, the basic pay of military personnel is covered under the Social Security program on a contributory basis. In addition to the contributory credits for basic pay, noncontributory wage credits of $300 were granted for each calendar quarter, from January 1957 through December 1977, in which a person received pay for military service. In years after 1977, noncontributory wage credits of $100 are granted for each $300 of military wages, up to a maximum credit of $1,200 per calendar year.

National Average Wage Index. See "Average Wage Index."

Normal retirement age. The age at which a person may first become entitled to unreduced retirement benefits. Currently age 65, but scheduled under present law to increase gradually to 67 for persons reaching that age in 2027 or later, beginning with an increase to 65 years and 2 months for persons reaching age 65 in 2003.

Old-Age and Survivors Insurance (OASI) Trust Fund. See "Trust fund."

Old-law base. Amount the contribution and benefit base would have been if the discretionary increases in the base under the 1977 amendments had not been enacted. The Social Security Amendments of 1972 provided for automatic annual indexing of the contribution and benefit base. The Social Security Amendments of 1977 provided ad hoc increases to the bases for 1979-81, with subsequent bases updated in accordance with the normal indexing procedure. See table II.E3.

Par value. The value printed on the face of a bond. For both public and special issues held by the trust funds, par value is also the redemption value at maturity.

Partial advance funding. A financing scheme where taxes are scheduled to provide a substantial accumulation of trust fund assets, thereby generating additional interest income to the trust funds and reducing the need for payroll tax increases in periods when costs are relatively high. (Higher general taxes or additional borrowing may be required, however, to support the payment of such interest.) While

substantial, the trust fund build-up under partial advance funding is much smaller than it would be with full advance funding.

Pay-as-you-go financing. A financing scheme where taxes are scheduled to produce just as much income as required to pay current benefits, with trust fund assets built up only to the extent needed to prevent exhaustion of the fund by random economic fluctuations.

Payroll taxes. A tax levied on the gross wages of workers. See tables II.B1 and III.A1.

Population in the Social Security Area. The population comprised of (i) residents of the 50 States and the District of Columbia (adjusted for net census undercount); (ii) civilian residents of Puerto Rico, the Virgin Islands, Guam, and American Samoa; (iii) Federal civilian employees and persons in the Armed Forces abroad and their dependents; (iv) crew members of merchant vessels; and (v) all other U.S. citizens abroad.

Present value. The equivalent value, at the present time, of a future stream of payments (either income or expenditures). The present value of a future stream of payments may be thought of as the lump-sum amount that, if invested today, together with interest earnings would be just enough to meet each of the payments as they fell due. At the time of the last payment, the invested fund would be exactly zero. For example, a home mortgage of $100,000 represents the present value at 8 percent interest of future monthly payments of $714.40 for the next 30 years. Present values are widely used in calculations involving financial transactions over long periods of time to account for the time value of money (interest) and the changing value of the dollar (inflation).

Primary insurance amount—PIA. The monthly amount payable to a retired worker who begins to receive benefits at normal retirement age or (generally) to a disabled worker. This amount, which is related to the worker's average monthly wage or average indexed monthly earnings, is also the amount used as a base for computing all types of benefits payable on the basis of one individual's earnings record.

Primary insurance amount formula. The mathematical formula relating the PIA to the AIME for workers who attain age 62, become disabled, or die after 1978. The PIA is equal to the sum of 90 percent of AIME up to the first bend point, plus 32 percent of AIME above the first bend point up to the second bend point, plus 15 percent of AIME in excess of the second bend point. Automatic benefit increases are applied beginning with the year of eligibility. See table II.E3 for historical and assumed future bend points and table II.E2 for historical and assumed future benefit increases.

Quarters of coverage. Basic unit of measurement for determining insured status. In 1995, a worker receives one quarter of coverage (up to a total of four) for each $630 of annual covered earnings. The amount of earnings required for a quarter of coverage is subject to annual automatic increases in proportion to increases in average earnings. For amounts applicable for years after 1978, see table II.E3.

Railroad retirement. A Federal insurance program, somewhat similar to Social Security, designed for workers in the railroad industry.

The provisions of the Railroad Retirement Act provide for a system of coordination and financial interchange between the Railroad Retirement program and the Social Security program.

Reallocation of tax rates. An increase in the tax rate payable to either the OASI or DI Trust Fund, with a corresponding reduction in the rate for the other fund, so that the total OASDI tax rate is not changed.

Real-wage differential. The difference between the percentage increases in (1) the average annual wage in covered employment and (2) the average annual Consumer Price Index. See table II.D1.

Recession. A period of adverse economic conditions; in particular, two or more successive calendar quarters of negative growth in either Gross Domestic Product (GDP), or Gross National Product (GNP).

Retired worker benefit. A monthly benefit payable to a fully insured retired worker aged 62 or older or to a person entitled under the transitionally insured status provision in the law. Retired-worker benefit data do not include special age-72 benefits.

Retirement age. The age at which an individual establishes entitlement to retirement benefits. See also, "Normal retirement age."

Retirement earnings test. See "Earnings test."

Retirement test. See "Earnings test."

Self-employment. Operation of a trade or business by an individual or by a partnership in which an individual is a member.

Self-Employment Contributions Act—SECA. Provision authorizing Social Security taxes on the net earnings of most self-employed persons.

Short range. The next 10 years. Short-range actuarial estimates are prepared for this period because of the short-range test of financial adequacy. The Social Security Act requires estimates for 5 years; estimates are prepared for an additional 5 years to help clarify trends which are only starting to develop in the mandated first 5-year period.

Social Security Act. Provisions of the law governing most operations of the Social Security program. Original Social Security Act is Public Law 74-271, enacted August 14, 1935. With subsequent amendments, the Social Security Act consists of 20 titles, of which four have been repealed. The Old-Age, Survivors, and Disability Insurance program is authorized by Title II of the Social Security Act.

Special public-debt obligation. Securities of the United States Government issued exclusively to the OASI, DI, HI, and SMI Trust Funds and other Federal trust funds. Section 201(d) of the Social Security Act provides that the public-debt obligations issued for purchase by the OASI and DI Trust Funds shall have maturities fixed with due regard for the needs of the funds. The usual practice in the past has been to spread the holdings of special issues, as of each June 30, so that the amounts maturing in each of the next 15 years are approximately equal. Special public-debt obligations are redeemable at par value at any time and carry interest rates determined by law (see "Interest rate"). See also tables II.C2 and II.C4 for a

listing of the obligations held by the OASI and DI Trust Funds, respectively.

Stabilizer provision. Section 215(i)(1)(C) of the Act, which provides that if the combined assets of the OASI and DI Trust Funds, as a percentage of estimated annual expenditures, fall below a specified level, automatic benefit increases will be limited to the lower of the increases in wages or prices. The specified level is 20 percent for benefit increases in 1989 and later.

Summarized balance. The difference between the summarized cost rate and the summarized income rate, expressed as a percentage of taxable payroll.

Summarized cost rate. The ratio of the present value of expenditures to the present value of the taxable payroll for the years in a given period. This ratio can be used as a measure of the relative level of expenditures during the period in question. For purposes of evaluating the financial adequacy of the program, the summarized cost rate is adjusted to include the cost of reaching and maintaining a "target" trust fund level. Because a trust fund level of about 1 year's expenditures is considered to be an adequate reserve for unforeseen contingencies, the targeted trust fund ratio used in determining summarized cost rates is 100 percent of annual expenditures. Accordingly, the adjusted summarized cost rate is equal to the ratio of (a) the sum of the present value of the outgo during the period plus the present value of the targeted ending trust fund level, to (b) the present value of the taxable payroll during the projection period.

Summarized income rate. The ratio of the present value of tax income to the present value of taxable payroll for the years in a given period. This ratio can be used as a measure of the relative level of income during the period in question. For purposes of evaluating the financial adequacy of the program, the summarized income rate is adjusted to include assets on hand at the beginning of the period. Accordingly, the adjusted summarized income rate equals the ratio of (a) the sum of the trust fund balance at the beginning of the period plus the present value of the total income from taxes during the period, to (b) the present value of the taxable payroll for the years in the period.

Supplemental Security Income—SSI. A Federally administered program (often with State supplementation) of cash assistance for needy aged, blind, or disabled persons. SSI is funded through the general fund of the Treasury and administered by the Social Security Administration.

Supplementary Medical Insurance (SMI) Trust Fund. See "Trust fund."

Survivor benefit. Benefit payable to a survivor of a deceased worker.

Taxable earnings. Wages and/or self-employment income, in employment covered by the OASDI and/or HI programs, that is under

the applicable annual maximum taxable limit. For 1994 and later, no maximum taxable limit applies to the HI program.

Taxable payroll. A weighted average of taxable wages and taxable self-employment income. When multiplied by the combined employee-employer tax rate, it yields the total amount of taxes incurred by employees, employers, and the self-employed for work during the period.

Taxable self-employment income. Net earnings from self-employment, generally above $400 and below the annual taxable and creditable maximum amount for a calendar or other taxable year, less any taxable wages in the same taxable year.

Taxable wages. See "Taxable earnings."

Taxation of benefits. During 1984-93, up to one-half of an individual's or a couple's OASDI benefits was potentially subject to Federal income taxation under certain circumstances. The revenue derived from this provision was allocated to the OASI and DI Trust Funds on the basis of the income taxes paid on the benefits from each fund. Beginning in 1994, the maximum portion of OASDI benefits potentially subject to taxation was increased to 85 percent. The additional revenue derived from taxation of benefits in excess of one-half, up to 85 percent, is allocated to the HI Trust Fund.

Taxes. See "Contributions."

Termination. Cessation of payment of a specific type of benefit because the beneficiary is no longer entitled to receive it. For example, benefits might terminate as a result of the death of the beneficiary, the recovery of a disabled beneficiary, or the attainment of age 18 by a child beneficiary. In some cases, the individual may become immediately entitled to another type of benefit (such as the conversion of a disabled worker beneficiary at normal retirement age to a retired worker beneficiary).

Test of Long-Range Close Actuarial Balance. Summarized income rates and cost rates are calculated for each of 66 valuation periods within the full 75-year long-range projection period. The first of these periods consists of the next 10 years. Each succeeding period becomes longer by 1 year, culminating with the period consisting of the next 75 years. The long-range test is met if, for each of the 66 valuation periods, the actuarial balance is not less than zero or is negative by, at most, a specified percentage of the summarized cost rate for the same time period. The percentage allowed for a negative actuarial balance is 0 percent for the 10-year period, grading uniformly to 5 percent for the full 75-year period. The criterion for meeting the test is less stringent for the longer periods in recognition of the greater uncertainty associated with estimates for more distant years. The test is applied to OASI and DI separately, as well as combined, based on the intermediate (alternative II) set of assumptions.

Test of Short-Range Financial Adequacy. The conditions required to meet this test are as follows:

- If the trust fund ratio for a fund exceeds 100 percent at the beginning of the projection period, then it must be projected

to remain at or above 100 percent throughout the 10-year projection period;

- Alternatively, if the fund ratio is initially less than 100 percent, it must be projected to reach a level of at least 100 percent within 5 years (and not be depleted at any time during this period) and then remain at or above 100 percent throughout the remainder of the 10-year period.

These conditions apply to each trust fund separately, as well as to the combined funds, and are evaluated based on the intermediate (alternative II) set of assumptions.

Total fertility rate. The average number of children who would be born to a woman in her lifetime if she were to experience the birth rates by age observed in, or assumed for, a specified year, and if she were to survive the entire child-bearing period.

Trust fund. Separate accounts in the United States Treasury in which are deposited the taxes received under the Federal Insurance Contributions Act, the Self-Employment Contributions Act, contributions resulting from coverage of State and local government employees; any sums received under the financial interchange with the railroad retirement account; voluntary hospital and medical insurance premiums; and transfers of Federal general revenues. Funds not withdrawn for current monthly or service benefits, the financial interchange, and administrative expenses are invested in interest-bearing Federal securities, as required by law; the interest earned is also deposited in the trust funds.

- **Old-Age and Survivors Insurance (OASI).** The trust fund used for paying monthly benefits to retired-worker (old-age) beneficiaries and their spouses and children and to survivors of deceased insured workers.
- **Disability Insurance (DI).** The trust fund used for paying monthly benefits to disabled worker beneficiaries and their spouses and children and for providing rehabilitation services to the disabled.
- **Hospital Insurance (HI).** The trust fund used for paying part of the costs of inpatient hospital services and related care for aged and disabled individuals who meet the eligibility requirements.
- **Supplementary Medical Insurance (SMI).** The trust fund used for paying part of the costs of physician's services, outpatient hospital services, and other related medical and health services for voluntarily enrolled aged and disabled individuals.

Trust fund ratio. A measure of the adequacy of the trust fund level. Defined as the assets at the beginning of the year, including advance tax transfers (if any), expressed as a percentage of the outgo during the year. The trust fund ratio represents the proportion of a year's outgo which could be paid with the funds available at the beginning of the year.

Unnegotiated check. A check which has not been cashed 6 months after the end of the month in which the check was issued. When a check has been outstanding for a year (i) the check is adminis-

tratively cancelled by the Department of the Treasury and (ii) the issuing trust fund is reimbursed separately for the amount of the check and interest for the period the check was outstanding. The appropriate trust fund also receives an interest adjustment for the time the check was outstanding if it is cashed 6-12 months after the month of issue. If a check is presented for payment after it is administratively cancelled, a replacement check is issued.

Valuation period. A period of years which is considered as a unit for purposes of calculating the financial status of a trust fund.

Vocational rehabilitation. Services provided to disabled persons to help enable them to return to gainful employment. Reimbursement from the trust funds for the costs of such services is made only in those cases where the services contributed to the successful rehabilitation of the beneficiaries.

Year of exhaustion. The year in which a trust fund would become unable to pay benefits when due because the assets of the fund were exhausted.

H. STATEMENT OF ACTUARIAL OPINION

It is my opinion that (1) the techniques and methodology used herein to evaluate the financial and actuarial status of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds are generally accepted within the actuarial profession; and (2) the assumptions used and the resulting actuarial estimates are, in the aggregate, reasonable for the purpose of evaluating the financial and actuarial status of the trust funds, taking into consideration the experience and expectations of the program.

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